GCSS-MC Portfolio

Information Handout

Fall 2001

Purpose

- Source Information for GCSS-MC Portfolio
- http://www.hqmc.usmc.mil/LPI.nsf/Main?OpenFrameset
  - Click on IT Initiatives Link and then on the GCSS Link

CONTENTS

- List of Handout Changes
- Overview and requirements
- Architectures and Services
- Portfolio
- Implementation
- Funding
- Warfighter Portal
- Command and Control
- Shared Data Environment
- Autonomic Logistics
- Clinger Cohen Checklist

List of Changes

18 September-30 October 2001

Additions

- Slide #
  - 6-9, 16, 21-23
  - 64-66, 73, 80
  - 84, 87, 92, 93-104
  - 101, 107, 109

Modifications

- Slide #
  - 13, 19, 20, 39, 42, 49
  - 54, 60, 74, 89, 90, 102

OVERVIEW AND REQUIREMENTS

GCSS-MC Description

GCSS-MC is the physical implementation of the enterprise information technology architecture designed to support both improved and enhanced MAGTF Combat Service Support functions and MAGTF Commander and Commander in Chief (CINC)/Joint Task Force (JTF) combat support information requirements. As such, GCSS-MC is not a single system but a portfolio of information technology capabilities tied to discrete performance measures that support required combat service support mission objectives.

GCSS-MC consists of four key functional components. These components are:

(1) **Data Capture** – The ability to accurately, efficiently, and quickly capture information and insert it into the appropriate information system.

(2) **Data Storage** – The ability to provide, via a Shared Data Environment (SDE), a common source of information shared by all applications. The SDE is an enterprise platform where business logic and data are separated that provides a single interface for authorized systems and applications to all USMC Combat Service Support information.

(3) **Data Manipulation** – The use of common commercial transaction and communication standards that allow applications to interact with one another.

(4) **Decision Support Tools** – Applications used by the Commander to support the decision making process. These tools include the applications for situation awareness, analysis, planning, and execution of combat service support operations.

GCSS-MC VISION

- Providing information relative to GCSS-MC is the responsibility of the Program Spokesperson, Mr. David Ferris. Delivering the GCSS message to a group of 41 stakeholders within the enterprise is accomplished by using a carefully developed communications (marketing) strategy. This marketing strategy has two major considerations:
  - To provide an information exchange with executive level decision makers on a routine basis;
  - To encourage a continuing education dialogue regarding schedules, funding, technology challenges, issues, critical success factors and next steps for the various components of the program.

- Recognizing that GCSS-MC is a complex program that touches many aspects of the enterprise, the brief presented at the 12-13 September 2001 Advocacy Board provides a contemporary view of especially critical, near-term initiatives. These initiatives are prioritized to satisfy the ILC objectives

- The GCSS-MC program began with almost a "blank sheet of paper." The initiative represents the physical implementation of the information technology architectures required for the ILC. In order for the program to succeed, a series of carefully planned events were organized beginning in 1998 when the logistics information systems transitioned from the Functional Advocate (FA) to the Acquisition control of MARCORSYSCOM.

- The ILC Analysis was completed during an 18-week engagement beginning in late October 1998 to early February 1999. This analysis concluded with an Executive Checkpoint including the Case Study, a high-level Business Case, and an aggressive Communications Marketing Plan.

- The ILC Analysis provided the foundation for logistics transformation within the Marine Corps and established a compliance response to DRID 54, directing that logistics transformation be accomplished throughout the service components. Immediately following the guidance of DRID 54, the GCSS-CRD was approved by the JROC and a strong partnership was forged between the FA and PM IS to accomplish aggressive transformation planning

- Beginning in 2001, the GMT was chartered using integrated resources provided by the FA and PM IS. The GMT established a portfolio management concept for GCSS-MC that focused on capabilities rather than functionality for logistics systems. A Portfolio Management Board chartered by the FA will administer the GCSS-MC portfolio management concept. It is anticipated this board will recommend investment criteria for a portfolio of approximately 30 systems.

INTEGRATED LOGISTICS CAPABILITY (ILC)

- As a combined effort, GCSS-MC and the ILC represent the foundation for an optimized logistics environment. This environment will be the centerpiec for a more complete and effective information management capability that focuses on warfighter needs while enabling logistics planners and operators t make smarter decisions in a rapid manner.

- By implementing GCSS-MC in consonance with ongoing ILC activities, the number of logistics information systems needed for warfighter support may be consolidated and lead to a more optimum logistics portfolio capability. GCSS-MC represents the physical implementation o the ILC Information Technology Architecture.

- Successful implementation of the ILC is contingent on two programs. The first program is the SDE and the second program is the ILC Port This portal is the first in a series of capabilities to give the Marines a tool to easily and confidently request supplies and Combat Service Support (CSS) services. Since the ILC concept consolidates support, to maintain or even increase CSS effectiveness, improved information exchange must be available between the customer and the service providers. The portal is a single web interface for using units and is intenc to be simple to use, yet powerful in the information it provides.

- The relationship between the ILC and GCSS-MC represents a strategic alliance between the FA and the Product Manager for Information Systems and Infrastructure. The GMT Charter is contained in this section and reflects the dependencies for this relationship and requires a highly effective working relationship as the critical components for effective logistics transformation planning and execution.

- As a combined effort, GCSS-MC and the ILC represent the energy for an optimized logistics environment. This environment is the centerpiece for a more complete and effective information management capability that focuses on warfighter needs while enabling smarter decisions in a rapid manner.

- GCSS-MC is committed to support the ILC through a series of concept validation activities beginning in Oct 02. These activities will valida the functional architecture that separates customer from application and application from data. The POCs feature a portal with sustaining middleware, supporting data warehouse(s) and order management capabilities, with decision support tools, resource management and personnel management products selected from best of breed COTS packages.

SYSTEMS REALIGNMENT AND CATEGORIZATION

(SRAC)

- The System Realignment and Categorization (SRAC) will review the current logistics portfolio of over 200 systems to eliminate costly redundancy and overlap. Final system realignment and divestiture is dependent on process and policy revisions approved by the Functional Advocate.

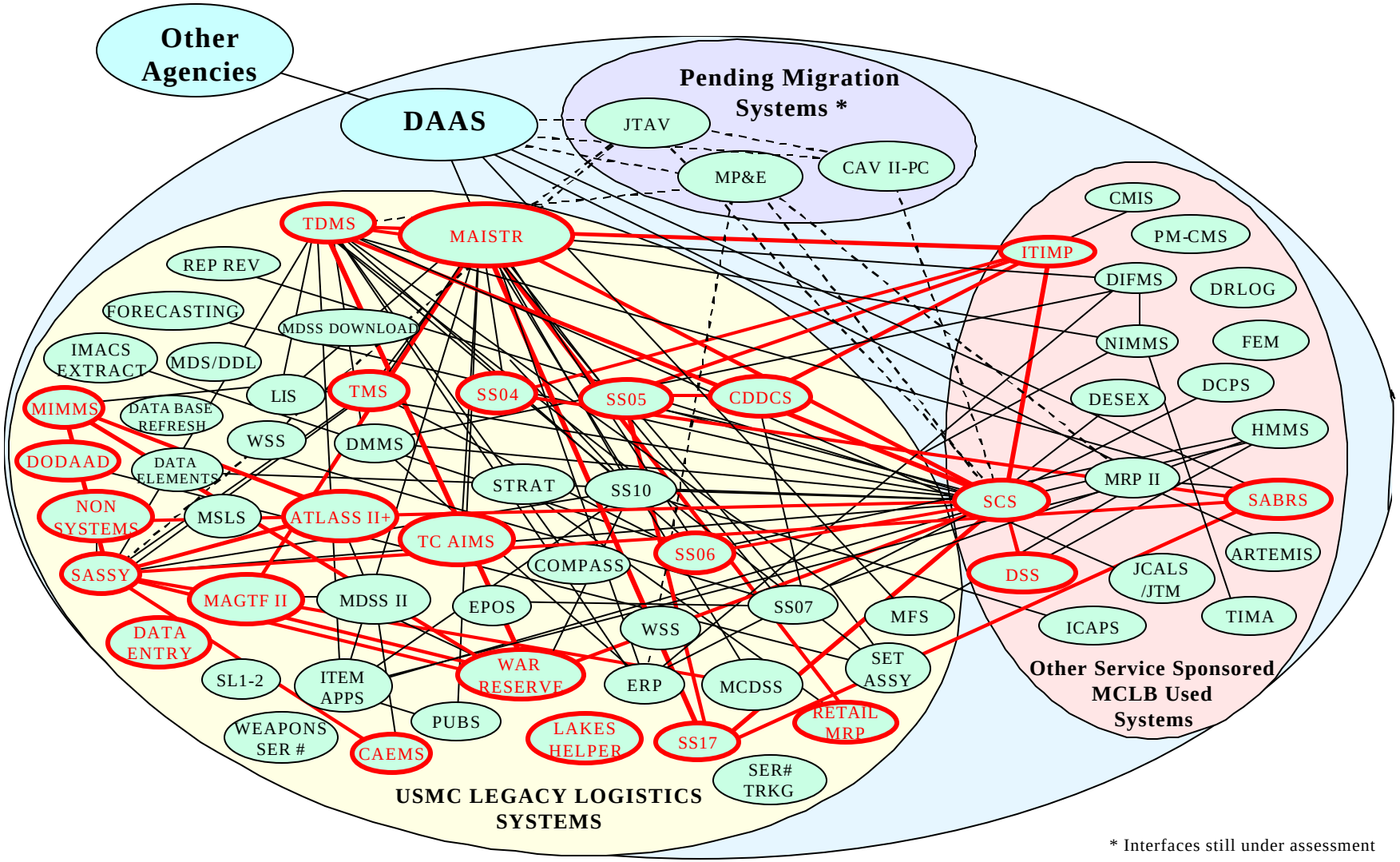
- SRAC will result in a realigned capability and a more streamlined portfolio representing the GCSS-MC family of systems. The final objectiv is an improved suite of technology enablers supporting re-engineered business processes that allow logistics planners to manage the supply chain using Intransit Visibility (ITV) fundamentals.

- The SRAC began operations in May 2001 and will conclude operations in September 2002. The program will address over 200 systems in tl transportation, maintenance, supply, acquisition, health service, and general engineering domains. To date SRAC has identified over 30 systems for possible divestiture.

- The process relies on a comprehensive three-phase approach that addresses no value AISs during Phase 1, followed by low value AISs durin Phase 2. Phase 3 is by far the most difficult since it addresses high value AISs and cross-domain integration issues.

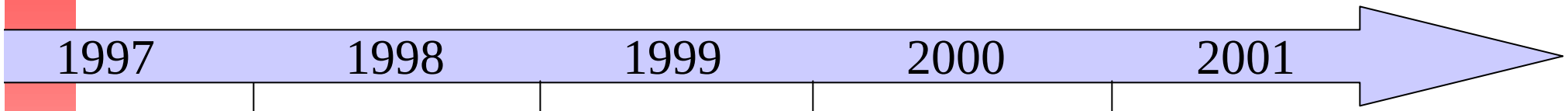
- SRAC was organized and funded by PM IS as a recommended process evolving from the ILC Analysis. The SRAC is managed by PM IS using an integrated team of functional experts and contractor support personnel. Exceptional support is provided by MCLBA personnel assigned to PM IS.

IN THE BEGINNING…



* Interfaces still under assessment

WE PLANNED…



1997	1998	1999	2000	2001
GCSS Mandated by DOD	GCSS-MC ORD Written	ILC Analysis Complete	GCSS CRD Approved by JROC	GMT Chartered
MAGTF C4I ORD	PM-IS established at SYSCOM	GCSS-MC ORD Approved	MCLCP	GCSS-MC Portfolio Established
	ILC started	SUL ACTD	DRID 54	GCSS-MC POM-04
			Functional Advocate & SYSCOM Partnership	C2 Requirements Conference
			AL ORD	
			OA, SRAC and GCSS-MC started	

…WE EXECUTE

High Level OA

SRAC Phases 1, 2, & 3

GCSS-MC PMB

ILC POC

SDE Pilots

Warfighter Portal Developed

Detailed OA Completed

ATLASS II+ Upgrade

SRAC Complete

GCSS-MC Core Deployed to operating forces

ILC 2nd POC

SDE Build

Warfighter Portal Next Version

C2 Prototype

Improved Warehouse Systems

SASSY/MIMMS Phase-out

DSS Integration

Autonomic Logistics

Depot Systems

Manpower Systems

Joint System Integration

Combat Engineering Applications

Other Required Functionality

Approach

- Overall a “bottoms up” approach using programs of record, task organized and not a system of systems (not a comprehensive package)
- Deputy Commandant Installations and Logistics is the Advocate for the GCSS-MC Portfolio
- Portfolio Management is used to manage the Logistics Information Technology Enterprise.
  - One portfolio approach for POM and a different approach for execution
    - For POM-04
      - Two structures
        - » Core Programs
        - » GCSS-MC New Initiatives Portfolio
- Capability is provided by the integration of SRAC and portfolio selected legacy systems and procurement of COTS/GOTS solutions into the GCSS-MC Infrastructure
  - COTS/GOTS includes ERP packages and commercial development tools

Clinger Cohen Compliance

- Business Process Reengineering
  - Contained ILC Business Case Study
- Analysis of Alternatives
  - Contained ILC Business Case Study
- Economic Analysis
  - Contained ILC Business Case Study
- Performance Measures
- Information Assurance Plan

Requirements Documents

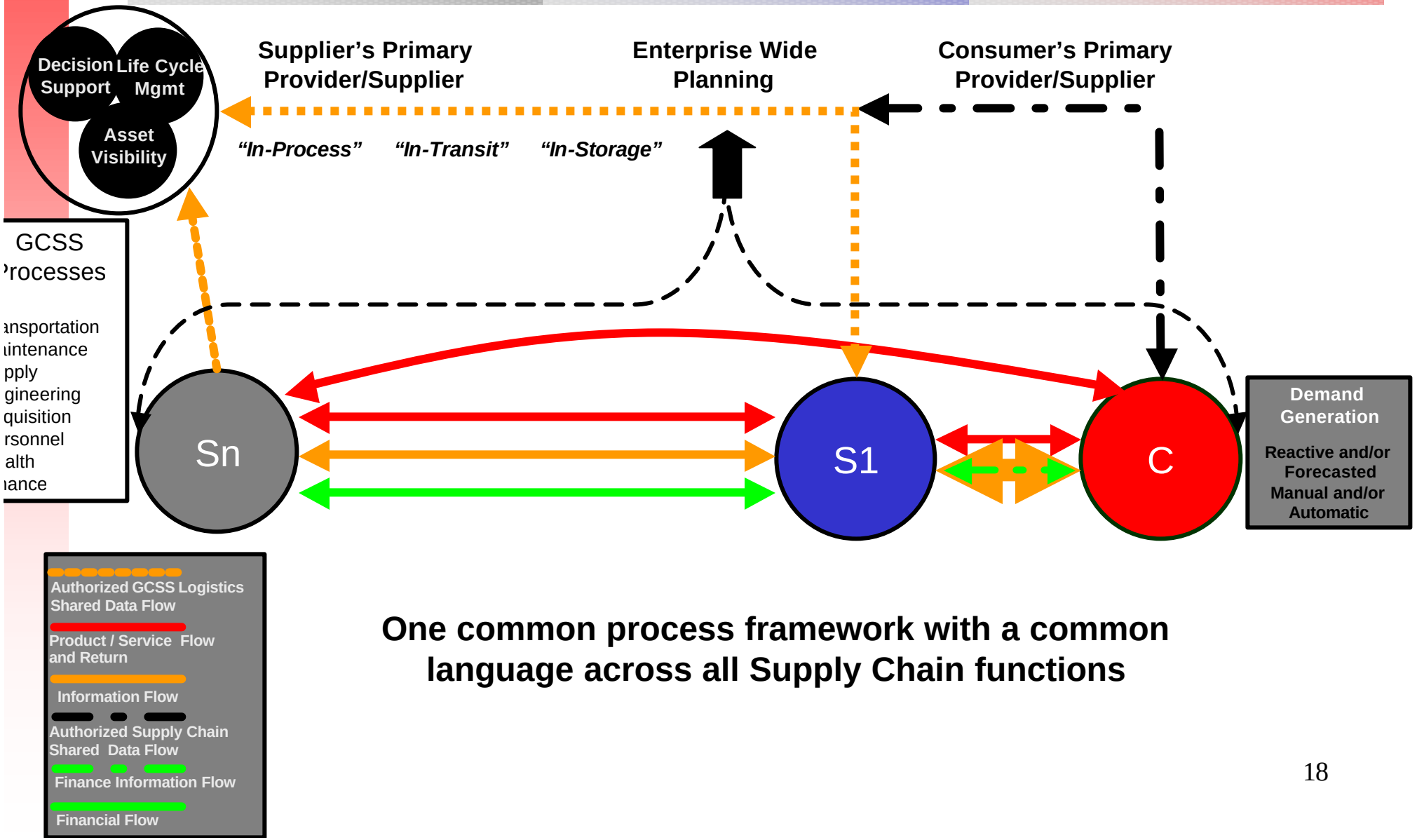
- GCSS-MC ORD (1999)(In revision 2001)
- ILC Business Case Study (1999)
- CSSE-SE ORD (1999)
- GCSS Capstone Requirements Document (2000)
- GCSS MNS (1997)
- Autonomic Logistics O&O (2001)
- LOG C2 UNS (2001)
- Warfighter's Portal UNS (2001)
- Marine Corps Logistics Campaign Plan (2001)
- ILC Operational Architecture (2001-2002)

GCSS-MC REQUIREMENTS CORRELATION MATRIX (RCM)

System Capabilities and Characteristics	Thresholds	Objectives
DII COE Compliant	6	8
Security	100%	100%
Interoperable	100% of IER's identified by the CRD and the ILC OA	100% of IER's identified by the CRD and the ILC C
GCSS-MC Near Term Deployed Application Operations	9600 bps	9600 bps
GCSS-MC Near Term Garrison Application Operations	56000 bps	128000 bps
GCSS-MC Deployed and Garrison Bandwidth Requirement	56000 bps	384000 bps
GCSS-MC User Access	Any authorized user, including other software applications, will be able to access the functionality and data of GCSS-MC using any GCSS-MC compliant browser enabled connected to the World Wide Web (WWW, or military Local Area Network (LAN).	Any authorized user, including other software applications, will be able to access the functionalit and data of GCSS-MC using any GCSS-MC compli browser enabled connected to the World Wide We (WWW, or military Local Area Network (LAN).
GCSS-MC Data Access Devices	Personal Computer, Laptop	Personal Digital Assistant (PDA)
Concurrent Users	35,000	60,000
Information Accuracy	95%	99.99%
Shared Data Environment amount of data degradation	99.90%	99.90%
Shared Data Processing	1 minute, 95% of the time after query completion	30 seconds, 95% of the time after query completi
Information Completeness	95%	99.99%
Information Timeliness Simple Queries. 95% of all simple queries completed	< 1 minute	< 30 seconds
Information Timeliness Complex Queries. 95% of all complex queries completed	< 2 minutes	< 30 seconds
Backup Power Sources	Uninterrupted Power Supply (UPS), commercial power, and engine generator	Uninterrupted Power Supply (UPS), commercial power, and engine generator backup
GCSS-MC Fault Isolation/Detection	100%	100%
Operational Availability	99.50%	99.90%
Help Desk	24x7	24x7

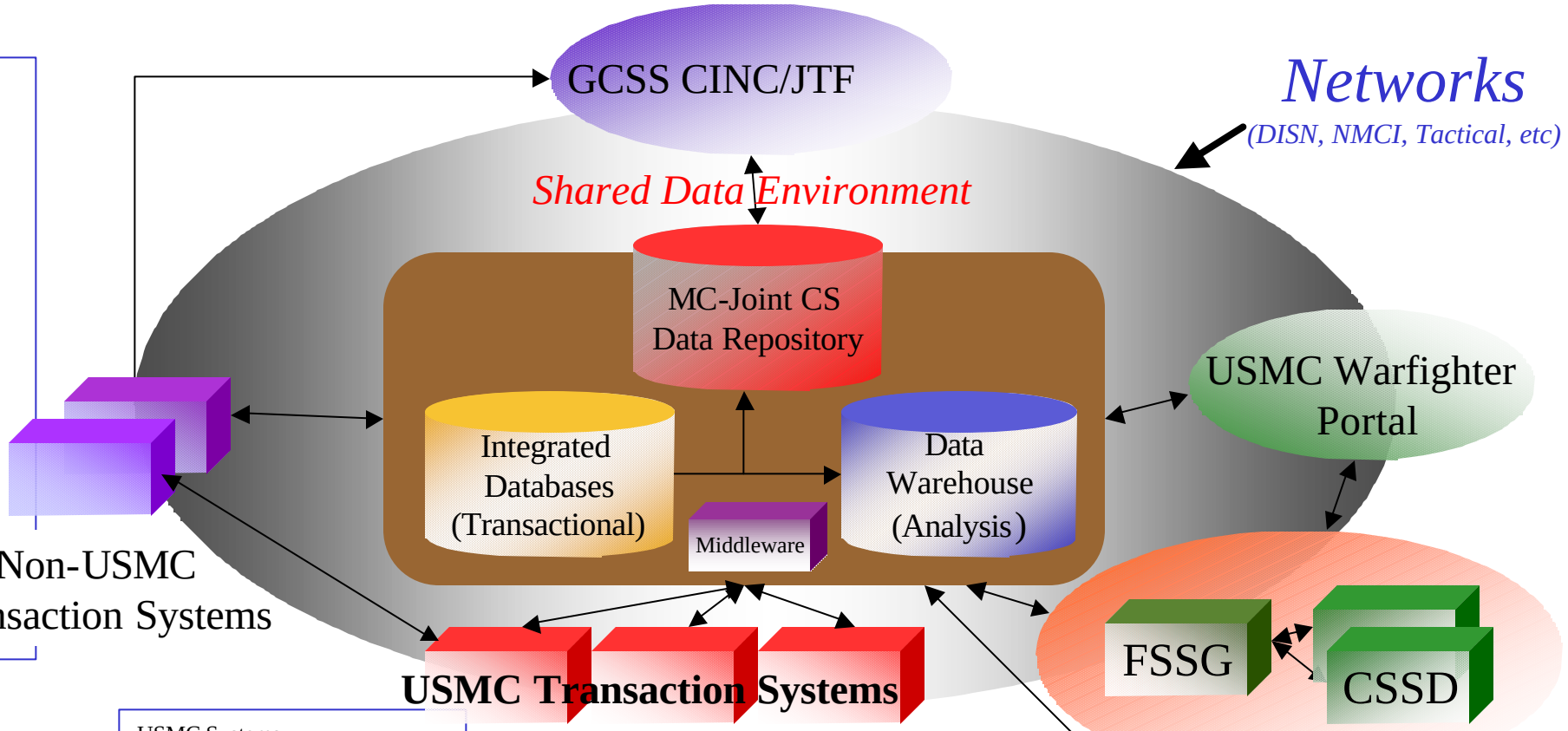
ARCHITECTURES AND SERVICES

Operational Architecture – OV-1



One common process framework with a common language across all Supply Chain functions

Notional GCSS-MC Systems Architecture



Joint Systems
AALPS
AMS
ICODES
JFRG II
TC AIMS II
TMIP-M

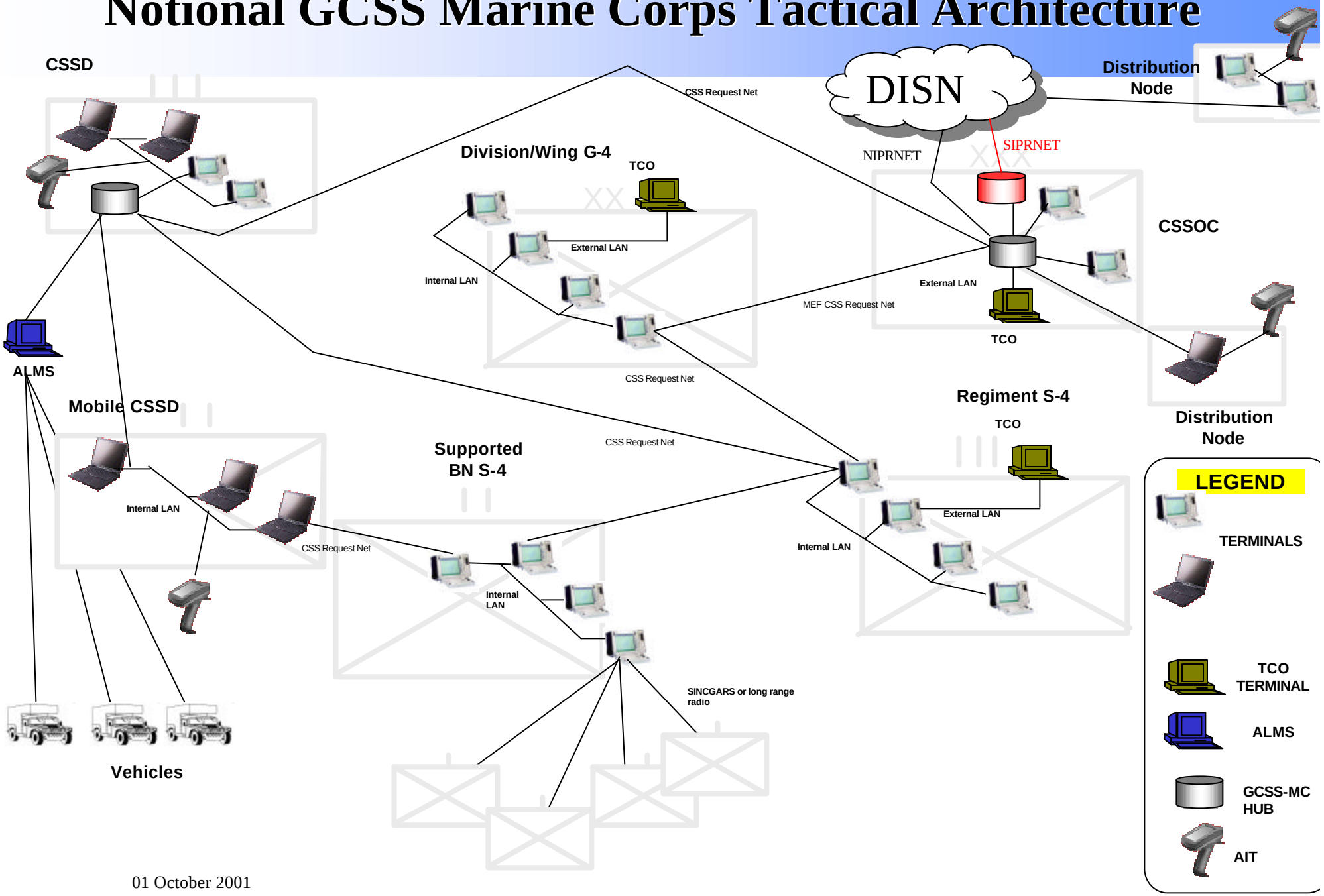
Other Service Systems
CAIMS-OSE/ROLMS
CAV II
CMOS
COMPASS
CONTRACT
DSS
FAS
MP&E
NIMMS
SCS

USMC Systems
- AIT Capability
- ATLASS II+
  - STRATIS
- MAGTF LOGAIS
  - MDSS II
  - TCAIMS
  - MAGTF II
  - SCM and ALPM
  - MDL

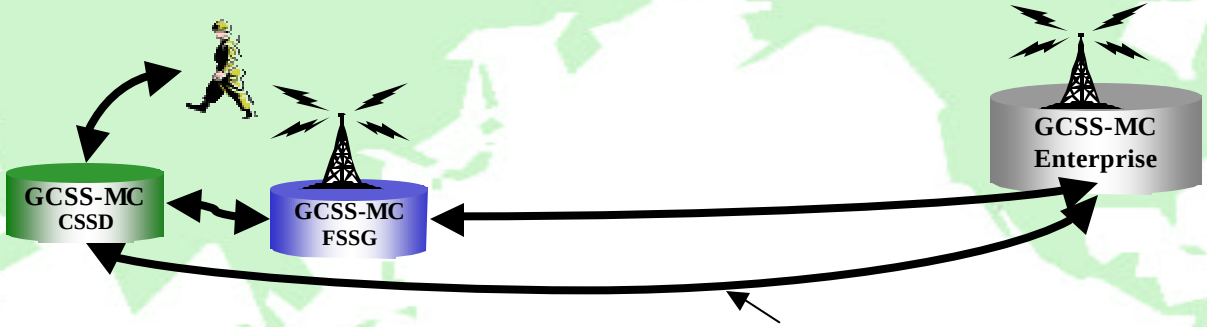
- MCDSS
- MCREM
- MIT
- NEIMS
- Paperless Acquisition
- SDE
- SUL/RRTS
- TDMS
- WRS

Manpower Portfolio
- UD/MIPS
- TFDW/ODSE
- TFSMS

Notional GCSS Marine Corps Tactical Architecture



GCSS-MC Near Term Concept of Operations



If adequate communications available.

GCSS-MC HW and SW

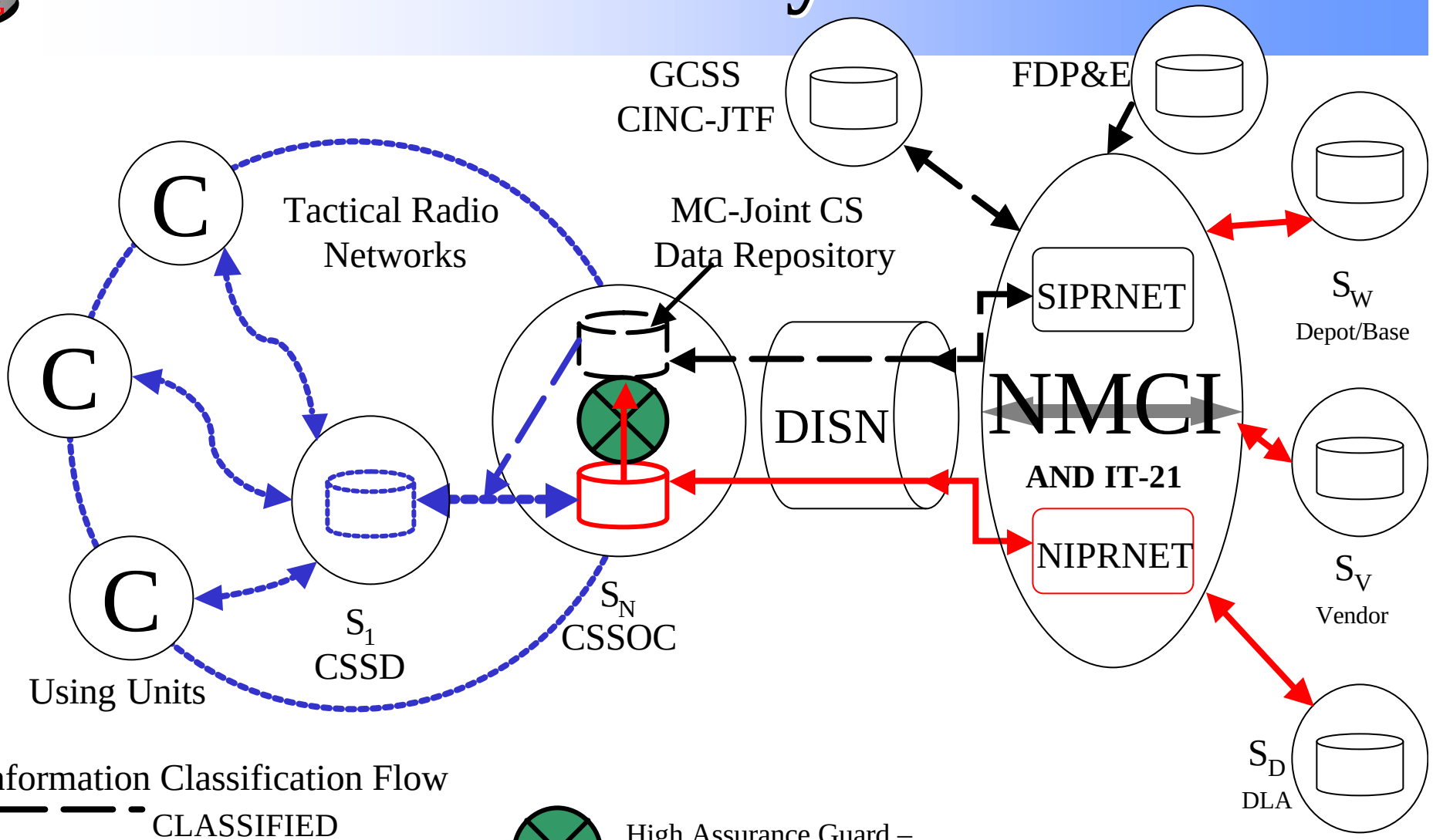
GCSS-MC Long Term Concept of Operations

GCSS-MC HW and SW

GCSS-MC Near Term Physical and Virtual Environments

Environments		Enterprise Production	Deployed FSSG	Deployed CSSD	Develop/Devel Spt	QA/Test	Enterprise Test/ Migration staging	Training and Exploration	Data-warehouse
Number of Sites:	**63.5**	**1.5**	**3**	**53**	**1**	**2**	**1**	**1**	**1**
Notes:		Geo Failover between the 2 sites; 1 site w/local Failover; Each site capacity for entire USMC.	Deployed, 1/FSSG, HA; deployed env.s not for garrison	Deployed - 14/FSSG, 12 Reserves & MPF; no failover(based on # UOCs/COC-As)	Dev env. with dev. support tools and products				

Notional Security Architecture



Information Classification Flow

CLASSIFIED

UNCLASSIFIED

OPERATIONS INFO
(TACTICAL RADIO NETWORKS)

High Assurance Guard –
One Way Data Replication

GCSS-MC Infrastructure

- Web-based Infrastructure Provides:
  - User Account Management
    - Identification
    - Access Control
  - User Interface (Look and Feel)
    - User customization
    - Situational/Deployed Customization (Mission, Geographic Location, etc…)
      - Transparent to the User
  - Data/Application Access and Integration
  - Hardware and Communications
    - Availability
    - Asynchronous communications environment

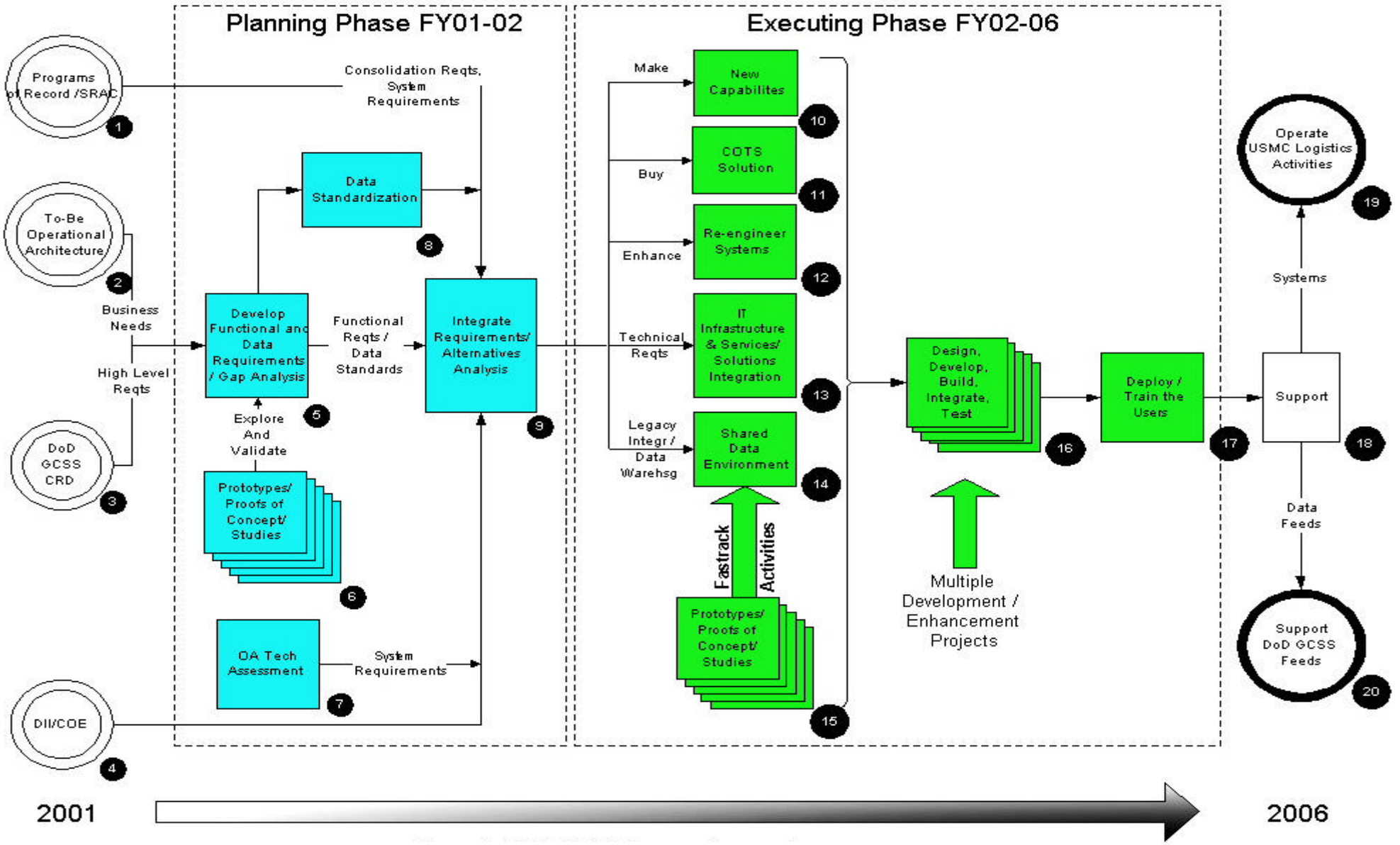
Security Attributes

- Security Attributes
  - Confidentiality
    - User Identification and authentication services provided by PKI
    - Develop Application Access Control Policies and User Registration Procedures
    - Bulk encryption
  - Integrity
    - Server side PKI provides “digital signature” services
  - Availability
    - Designed from start to work in asynchronous low-bandwidth environment
    - Fault tolerant infrastructure
    - Graceful degradation
- Information push from protected networks to classified networks

Enterprise Security Policy

- Responsibilities
  - Portal
    - User Verification and Authentication
    - PKI
    - Confidentiality and Integrity of communications between client and application servers
  - Shared Data Environment
    - Data Aggregation Rules for Applications and Users
    - Data push to SIPRNET Data Repository (GCSS-CINC/JTF)
  - Applications
    - Application Access Control Lists
    - User Registration
  - Infrastructure
    - Availability

GCSS-MC PROCESS



PORTFOLIO

What is a portfolio?

- "… the **Clinger-Cohen Act** (CCA), mandates that DoD … IT investments are managed and evaluated based on *measurable* contributions to DoD mission *goals* and *priorities*, in *support* of end-to-end *mission outcomes* that cross operational, functional, and organizational boundaries… (DoD 8120)"

- ***Portfolio***: The **resources**, **management**, and **related investments** that are required to accomplish a **mission-related outcome**. A portfolio must include **performance measures** and an expected **return on investment.** (DoD 8120)

Portfolio Responsibilities

1. Allows the PM to manage logistics information technology projects in a consistent disciplined manner.

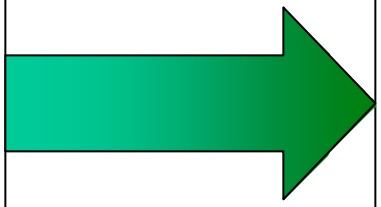
2. Supports a standard approach to validating and analyzing new logistics information technology requirements.

3. Allows the PM to rapidly fund and deploy new validated, prioritized requirements and technologies that support Portfolio objectives.

GCSS-MC Portfolio Structure

Phase 1 POM

- Core Portfolio consisting of current programs of record
- New-Initiatives Portfolio consisting of three segments:
  - New Initiatives
  - GCSS Compliancy
  - Program of Record Enhancements



Phase 2 Execution

- CSS Execution Portfolio
- CSS Decision Support Portfolio

All portfolios mapped to same set of Combat Service Support Capabilities and Performance Metrics

Two Phase, Two Tiered Approach

Portfolio Execution

- Currently in POM Phase for FY-04
- During program execution both Core and New initiatives portfolios will be merged into one or two (TBD) GCSS-MC portfolios under the general direction of a Portfolio Management Board (or Portfolio Investment Board).
- The GMT is the execution manager.
- These execution portfolios and board will be resolved in the summer/fall timeframe

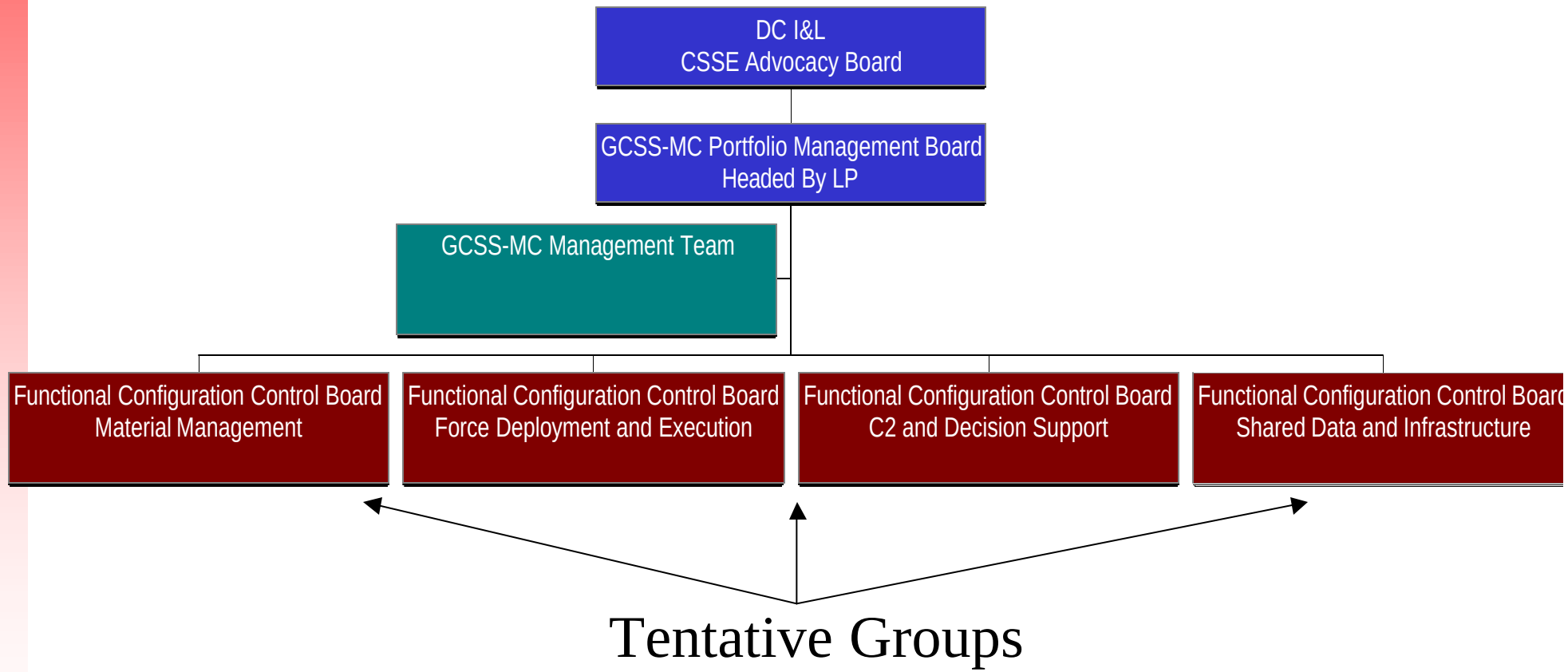
Management Structure

- Portfolio Management Process consists of:
  1. ***Investment Selection*** -- Creating a portfolio of IT project investments that maximizes mission performance, using an approved set of criteria for consistent comparison of projects *(SRAC).*
  2. ***Investment Control*** -- Measuring ongoing IT projects against their projected costs, schedules, and benefits and taking action to continue, modify, or cancel them.
  3. ***Investment Evaluation*** -- Determining the actual value of an implemented investment against the organization's mission requirements and adapting the IT investment process to reflect lessons learned.
- The Portfolio Management Structure is responsible for executing this process

Portfolio Management Structure

- DC I&L Head, CSSE Advocacy Board Oversight
- Portfolio Management Board (LP Chairs)
  - Members
    - ILC, PMIS, LPV, LF, C4, P&R, Manpower, PP&O,Others
  - Meet 3-4 Times a year, timed with Fiscal Obligations, CSSE Advocacy Board
  - *Follows* DON Portfolio Model
  - *Determine Investments* for 6-18 Months
  - *Validate* Ongoing and Planned IT Acquisition Activities
  - *Prioritize* Emerging Requirements
  - *Preparatory* Work for POM Deliberations
  - *Act* on SRAC Decisions
  - *Act* as a Coordination and Integration forum for Logistics IT Modernizatior
- System/Functional Configuration Boards
  - Project Officers, Operating Forces, HQMC Policy Owners
    - Day to Day System Upkeep (new colors, change layout)
    - Major issues go to Portfolio Management Board

Portfolio Management Structure



GCSS-MC POM Portfolio

- Systems were selected if identified during CINC requirements meetings
  - Met with over 80 USMC personnel
  - Compared systems against CINC Requirements
  - 360 sub requirements: 198 USMC, 8 partial USMC, 43 gap or partial gap requirements, 20 redundant or undetermined
  - Includes USMC systems and other Service systems the USMC funds or hosts internally
- POM Portfolio only tracks new initiative funding
- Funding based on system development estimates from project officers
- Gap funding (new systems) will also be identified

GCSS-MC POM Portfolio

- Three Segments:
  - Programs of Record – Enhancements (Above Core)
    - Programs requesting additional funds to satisfy requirements not *directly* associated with GCSS-MC
  - GCSS-MC Compliancy (Above Core)
    - Programs requesting additional funds to satisfy direct GCSS-MC requirements
  - New Initiatives
    - New programs to satisfy GCSS-MC gap requirements
    - DSS: Engineering, Autonomic Log, Portal, CSS Toolkit: Situational Awareness/Assessment
- Note: Core programs are not in a portfolio
  - JFRG II, ATLASS, TMIP, TC AIMS II, etc.
  - Includes O&M support during transition period
  - Submitted directly by the program's project officers

GCSS-MC POM Portfolio

New Initiatives

New programs to satisfy GCSS-MC requirements

Engineering Tools, Autonomic Log, Portal, CSS Toolkit

GCSS-MC Compliancy

Funding necessary to transition programs to satisfy GCSS-MC requirements

System Modernization Program

Programs of Record – Enhancements

Programs requesting additional funds to satisfy requirements not *directly* associated with GCSS-MC

ATLASS II+, TCAIMS II

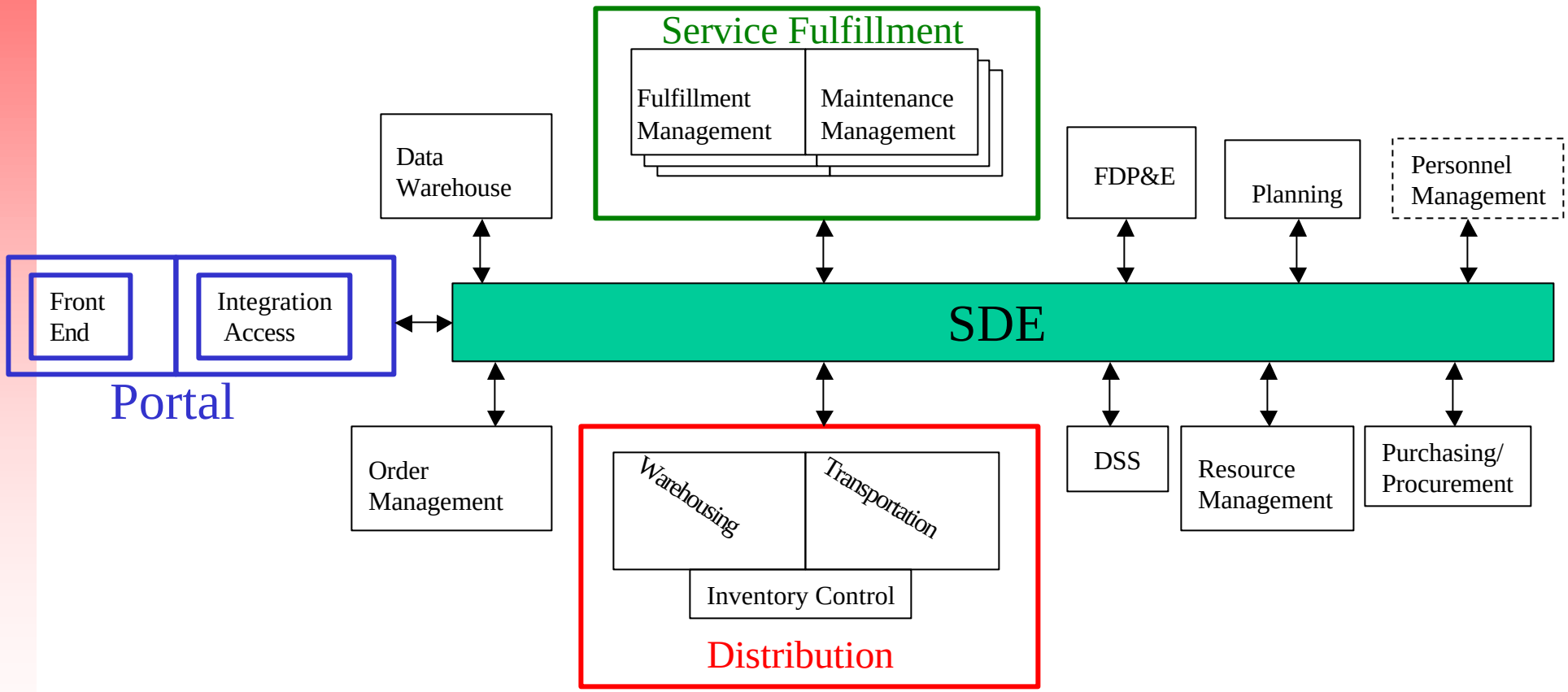
Information Technology Capabilities

- Capabilities are measurable organizational functions or processes.
- Systems provide some of the capabilities.
- Portfolios are built from single, multiple or combinations of different capability sets.

GCSS-MC Capabilities Set

- Systems will be mapped to one or more portfolio capabilities
- Basic Capabilities are:
  - Decision Support
  - Demand Generation
  - Distribution
  - Force Deployment and Execution
  - Order Management
  - Personnel Management
  - Planning
  - Purchasing/Procurement
  - Resource Management
  - Service Fulfillment
  - Technical Requirements
  - Possibly others…
- Adopted from Integrated Logistics Capabilities
- Approximately 30 Major Subcapabilities
- May change as detailed OA develops

GCSS-MC Capabilities and Architecture



Capability Definitions

ID	Capability	Definition
D	**Distribution**	The activities associated with the movement of material from the supplier to the customer
DG	**Demand Generation**	The activities necessary to capture, format, and provide requirements to the organizations chartered to fulfill the need
DS	**Decision Support**	The ability to support the commander's decision making process by providing situational awareness, collaborative planning and forecasting tools in an operational environment
FD	**Force Deployment and Execution**	The ability to allow efficient and effective movement of forces from their origin to ports of embarkation and on to ports of debarkation and final destination. Support includes marshaling, staging, embarking, and deploying the command.
OM	**Order Management**	The ability to plan, direct, monitor, and control processes related to customer orders, manufacturing orders and purchase orders
PL	**Planning**	The process of setting goals for the organization and choosing various ways to use the organization's resources to achieve the goals. Applied in this context to the management of the supply chain.
PM	**Personnel Management**	The activities involved in managing and monitoring the actions, capabilities, location, and training of an organization's personnel
PP	**Purchasing/Procurement**	The ability to procure materials, supplies, and services
RM	**Resource Management**	The business functions of developing resource requirements, identifying sources of funding, determining cost, acquiring funds, distributing/controlling funds, tracking costs and obligations, cost capturing and reimbursement, and establishing management costs.
SF	**Service Fulfillment**	The ability to perform a service in support of a requirement
TR	**Technical Requirements**	System and Technical Architecture requirements to fulfill capabilities

Subcapability Definitions

Capability ID	Subcapability Name	Definition
D	**Warehousing**	The activities related to receiving, storing, and shipping materials to and from production and distribution locations
D	**Transportation**	and material) in the correct location at the proper time in order to start and maintain operations
D	**Inventory control**	The activities and techniques of maintaining the desired levels of items.
DG	**Demand Generation**	The ability of the customer to identify and request a need
DS	**Situational Awareness**	The ability to have as much knowledge as possible about the current state of the operational environment
DS	**Analysis**	The ability to separate any situation into its parts; with an examination of these parts to find out their nature, proportion, function, interrelationship
DS	**Planning**	The process of developing practical schemes for taking future actions
FD	**Deployment Planning**	Operational planning directed toward the movement of forces and sustainment resources from their original locations to a specific operational area for conducting the joint operations contemplated in a given plan. Encompasses all activities from origin or
FD	**Deployment Execution**	The activities involved in staging, embarking, moving, debarking and assembling forces(organizations of personnel and equipment with specific mission capabilities) into and out of a theater of operations in support of an operational

Subcapability Definitions

Capability ID	Subcapability Name	Subcapability Definition
OM	**Customer Order Management**	The activities associated with managing customer orders for products and services.
OM	**Order Promising**	Actions taken to confirm customer order and estimate time of delivery, and provide necessary status.
OM	**Order Entry**	Actions taken to enter customer demands into execution applications.
OM	**Order Routing**	Actions taken to route the customer order to the organization(s) responsible for fulfilling the demand.
OM	**Order Release**	Actions taken to release the completed order to the customer.
OM	**Customer Billing/Reconciliation**	Actions taken to bill the customer and reconcile customer account.
OM	**Customer Receipt/Acceptance**	Customer receipt and acceptance of order.
PL	**Planning**	The process of setting material and product goals for the Combat Service Support organization and choosing various methods to use the organizations resources to achieve the goals.
PL	**Forecasting**	The process of predicting dates and use of products/services so they can be purachased or stored in appropriate quantities in advance.
PL	**Demand Management**	The process of recognizing all demands for products and services to support fulfillment. This includes prioritization when supply is lacking.

Subcapability Definitions

Capability ID	Subcapability Name	Subcapability Definition
PP	**Procurement Planning**	The process of planning procurements
PP	**Purchasing**	The activities associated with fulfilling demands for supplies and services through purchase orders.
PP	**Receiving, Acceptance and Payment**	The activities associated with receiving, inspecting, accepting products or services acquired via purchase order, and payment.
RM	**Define and ID Resource Requirements**	The activities involved in developing resource requirements, identifying sources of funding, determining cost, acquiring funds, and distributing and controlling funds.
RM	**Tracking Resources**	The activities involved in tracking costs and obligations, cost capturing and reimbursement .
RM	**Resource Management Controls**	The activities involved with resource management controls including financial reporting.
RM	**Asset Management**	A total picture of an organizations assets and their statuses. It may point to other functions/capabilities.
SF	**Maintenance Management**	Actions taken to retain or restore material to serviceable condition
SF	**Health Services**	Actions taken to minimize the effects of wounds, injuries, and disease on unit effectiveness, readiness, and morale
SF	**Engineering**	Actions taken to enhance the force's momentum by physically shaping the battlespace to make the most efficient use of the space and time necessary to generate mass and speed while denying the enemy unencumbered maneuver. Tasks performed in the rear area that serve to sustain forward combat operations
SF	**Services**	Services are those activities that are necessary for the effective administration, management, and employment of military organizations.Postal, Disbursing, Exchange, etc
SF	**Project Call Handling**	
SF	**Fulfillment Management**	Workflow, routing, control, assignment, coordination, follow-through, and quality of service for deliver of service and materials

Technical Requirements

Capability ID	Subcapability Name	Subcapability Definition
TR	**Shared Data**	The activity and technical platform where information is made available to persons and applications authorized access. The data is independent of the application that created it and is provided in a coherent manner even though it may have originated in ph
TR	**AIT**	Equipment used to facilitate the collection of initial source data and identify material in the logistics pipeline
TR	**Internet Infrastructure**	An architecture, software, and equipment that maximizes the use of TCP/IP protocols as well as those protocols and software that use "World Wide Web" sanctioned standards such as HTML, HTTP, and XML
TR	**Information Assurance**	The activities taken to ensure that the appropriate levels of confidentiallity, integrity, and availability are applied to information systems
TR	**JTA/DII-COE**	DOD standards for technical and systems architectures, software, and hardware.

GCSS-MC Portfolio Performance Metrics

PERFORMANCE METRIC	SOURCE	METRIC TYPE
Customer wait time	ILC, DRID 54, MCLCP	TIME
Repair cycle time	ILC, MCLCP	TIME
Materiel readiness	ILC, MCLCP	PERCENTAGE
Time definite delivery	ILC, DRID 54, MCLCP	PERCENTAGE
Asset Visibility	DRID 54	PERCENTAGE
Maintenance deployed cube	ILC	QUANTITY
PEI/SECREP deadline time	ILC	TIME
Inventory value	ILC	VALUE
Inventory carrying costs	ILC	VALUE
Distribution costs	ILC	VALUE
Inventory cube	ILC	QUANTITY
Percentage of 4th EOM outsourced	ILC	PERCENTAGE
Personnel reassigned	ILC	QUANTITY
Capital costs	ILC	VALUE
Availability	GCSS CRD	PERCENTAGE
Relevancy/ Currency	GCSS CRD	PERCENTAGE
Responsiveness (Total Asset Visibility)	GCSS CRD	PERCENTAGE
Shared Data Environment	GCSS MC	PERCENTAGE/BOOLEAN
Common Data Standards	GCSS MC	PERCENTAGE/BOOLEAN

GCSS-MC Portfolio Systems

USMC Systems
- **AIT Capability**
- **ATLASS II+**
  - **STRATIS**
- **MAGTF LOGAIS**
  - **MDSS II**
  - **TCAIMS**
  - **MAGTF II**
  - **SCM and ALPM**
  - **MDL**

Joint Systems
- AALPS
- AMS
- ICODES
- JFRG II
- TC AIMS II
- TMIP-M

USMC Systems
- **MCDSS**
- **MCREM**
- **MIT**
- **NEIMS**
- **Paperless Acquisition**
- **SDE**
- **SUL/RRTS**
- **TDMS**
- **WRS**

Manpower Portfolio
- **UD/MIPS/MCTFS**
- **TFDW/ODSE**
- **TFSMS**

Other Service Systems
- *CAIMS-OSE/ROLMS*
- *CAV II*
- *CMOS*
- *COMPASS CONTRACT*
- *DSS*
- *FAS*
- *MP&E*
- *NIMMS*
- *SCS*

New Initiatives
- Warfighter Portal
- Autonomic Logistics
- Decision Support Tools
- Combat/Service Engineering Tools

System Descriptions

System	Description	Notes
AIT	Automated Identification Technology	Includes AIT HW,
AMS	Automated Manifesting System	Joint System
ATLASS II+	Asset Tracking and Logistics and Supply System	ATLASS includes STRATIS (MOWASP replacement). Replace SASSY/ MIMMS
CAIMS-OSE/ROLMS	Conventional Ammunition Integrated Management System/Retail Ordnance Logistics Management System	Navy Owned
CAV II	Commercial Asset Visibility	Navy Owned
CMOS	Cargo Movement Operations System	Air Force
COMPASS CONTRACT	Computerized Provisioning Allowance and Supply System	Navy
FAS	Fuel tracking system	DLA
JFRG II	Joint Forces Requirement Generator	Joint System-- FDP&E - Planning
MAGTF LOGAIS Rollup	MDSS II, TCAIMS, MAGTF II, MDL, AALPS, ICODES	AALPS and ICODES are joint load planning tools.
MCDSS	Material Capability Decision Support System	Depot management and decision support
MCREM	Marine Corps Readiness Evaluation Model	Everything owned versus what's onhand and T/E fed from MCGERR
MIT	MPF Information Tool	MPF data access
DSS	Distributed Standard System	Asset visibility at depot-- Replaces MOWASP
MP&E	Maintenance Planning and Execution (Depot Level)	AF system

System Descriptions (cont.)

System	Description	Notes
NEIMS	NAL MEB Equipment Inventory Management System	Sufficient data may be in SASSY/ ATLASS. Owned by Norway
NIMMS	Naval Inventory Material Management System	Maintenance assets at depots (instead of DSSC) -- Navy Owned
Paperless Acquisition	Procurement/Contracting system	
SCM and ALPM	Sustainment Calculation Module, Aviation Load Planning Module	ALPM does bed down requirements and related, also aviation packages CISPs, etc.
SCS	Stock Control System	Air Force
SDE	Shared Data Environment	
SUL	Small Unit Logistics	
TC AIMS II	Transportation Coordinator's Automated Information for Movement System	Joint System
TDMS	Technical Data Management System	Source for technical reference data
TFDW/ ODSE	Total Force Data Warehouse/Operational Data Store Enterprise	Manpower system
TFSMS	Total Force Structure Management System	Source reference system
TMIP	Theater Medical Information Program	Joint System
UD/MIPS/ MCTFS	Manpower, Unit Diary, MC Total Force System	linked w/TFDW
WRS	War Reserve System	Sustainment and issue of war reserve materials

System Descriptions (cont.)

System	Description	Notes
Warfighter Portal	Web-based demand generation	GAP SYSTEM
Autonomic Logistics	AIS portion for AL	GAP SYSTEM
JTL/CSS toolkit	Decision Support Tools	GAP SYSTEM
Combat Service Engineering	Automated Tools to support engineers	GAP SYSTEM

Gap Portfolio Systems

- Gap systems are notional placeholders for systems needed to fulfill capabilities not addressed by current portfolio systems
  - Warfighter Portal
  - Autonomic Logistics (IT portion)
  - JTL/CSS toolkit (decision support)
  - Combat Service Engineering
- Other Gap examples
  - Water production, location, transportation requirement/capability
  - Real-time logistics supportability analysis: tactical sustainment (DOS, actual/Anticipated consumption, IMPACTS)
  - Staging/marshaling area planning, flow, analysis
  - Projecting expected requirements and capabilities of CSS services to meet expected demand under operational conditions
  - Port management when under USMC control

CSS-MC PORTFOLIO CAPABILITIES MAP (19 OCTOBER 2001)

abilities	Distribution			Demand Generation	Decision Support			Force Deployment and Execution		Order Management							Planning			Personnel Management	Purchasing/Procurement				Resource Management				Service Fulfillment						Technical Requirements						CINC-57 GAPS
	Warehousing	Transportation	Inventory control	Demand Generation	Situational Awareness	Analysis	Planning	Deployment Planning	Deployment Execution	Customer Order Management	Order Promising	Order Entry	Order Routing	Order Release	Customer Billing/Reconciliation	Customer Receipt/Acceptance	Planning	Forecasting	Demand Management	Personnel Management	Procurement Planning	Purchasing	Receiving, Acceptance and Payment	Define and ID Resource Requirements	Tracking Resources	Resource Management Controls	Asset Management	Maintenance Management	Health Services	Engineering	Services	Project Call Handling	Fulfillment Management	Shared Data	AIT	Internet Infrastructure	Information Assurance	JTA/DII-COE	Water production, location, trans.
ASS II+																																							
GTF LOGAIS Rollup																																							
DSS																																							
REM																																							
MS																																							
M and ALPM																																							
/RRTS																																							
MS																																							
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GCSS-MC Portfolio Funding

- Add funding from systems in structure to get total portfolio funding requirements
  - Development costs estimated
  - 25%/year added for maintenance, operations and other support
  - Some of the systems don't need any funding
- Current development (R&D) funding over the 5 year life of the POM cycle is estimated to be $50-$60 million
- Funding is still in development
  - Need to do gaps
  - Need to do support costs
  - Need to do infrastructure and deployment costs
  - Need to look at Core funding for potential redirection
- Out of scope:
  - NMCI related expenses
  - Tactical communications expenses
  - Other network related and data center indirect expenses

Core Programs in POM 04

- Core programs will be POM' d as individual programs of record (PORs) to support ongoing lifecycle management
- Substantial analysis is required to adequately address current program needs versus GCSS-MC requirements. The assumption is little money is available in Core to both sustain PORs during the transition AND support *significant* GCSS-MC efforts.
- Exceptions:
  - ATLASS II+/ PIP has a robust profile developed to satisfy the old business model. It needs its funding retained as part of the GCSS-MC portfolio and redirected to fulfill GCSS-MC and DoD mandated requirements. After a thorough alternatives analysis, the funding should be appropriately redirected for GCSS-MC efforts for material management, web-basing and filling gaps in FY02-FY08.
  - SDE is already a GCSS-MC component and its funds should be used as planned to support architecture, infrastructure, data standards, data warehousing and acceleration of other GCSS-MC efforts before FY04 and beyond.
  - MAGTF CSSE/SE has funding, some of which may also be able to be redirected within its programs for increased functionality.

Related USMC Portfolios

These other portfolios provide cross functional capability and information to the GCSS-MC Portfolio. Currently, these systems are not under the purview of the Portfolio Management Board, but must be considered when managing the GCSS Portfolio.

- **Manpower**
  - PES, Manpower Models, etc…
- **Finance**
  - SABRS, etc
- **Base Support Functions**
  - MWR
  - Environment/HAZMAT
  - Installations Management
- **Aviation Logistics**
  - NALCOMIS
  - Other Naval Aviation Systems

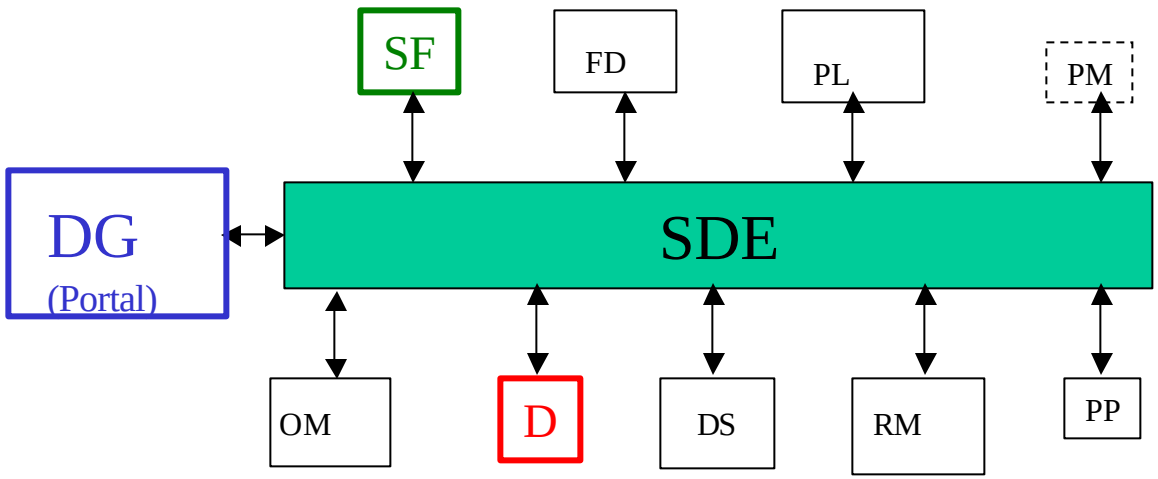
GCSS-MC IMPLEMENTATION

GCSS-MC Drivers

Infrastructure
NMCI
TACTICAL COMMUNICATIONS
SHIPBOARD COMMUNICATIONS
SECURITY

Requirements
ORD's
ILC OA
GCSS CRD
GCSS PMB
CCB

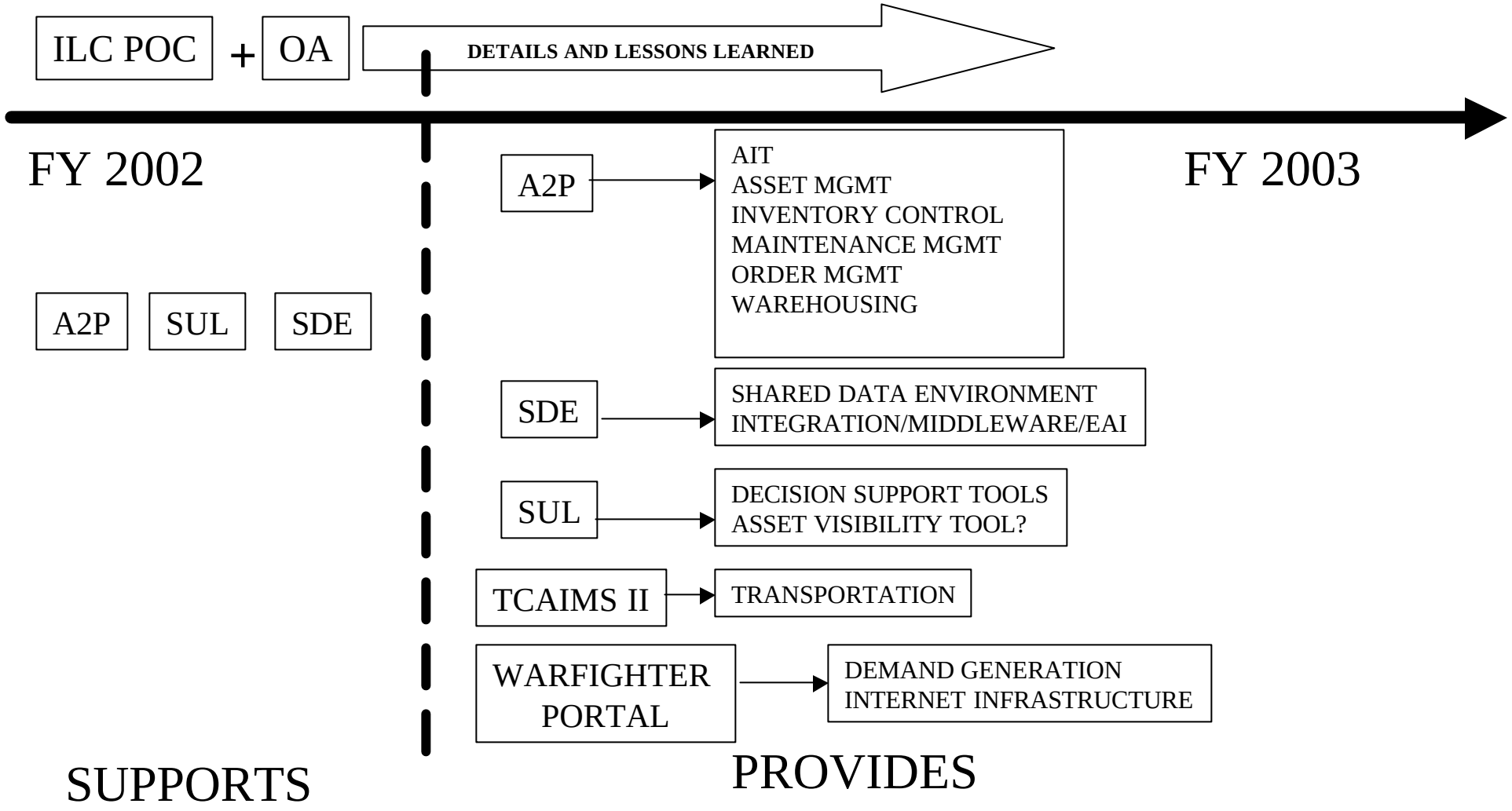
Systems
GCSS-MC PORTFOLIO
MAJOR SYSTEMS
ATLASS II+
TCAIMS II
SUL
SDE



Initiatives
WARFIGHTER'S PORTAL
PM LAV IDE
AUTONOMIC LOGISTICS
GATOR LINK
ONR RESEARCH
BIC AIMS

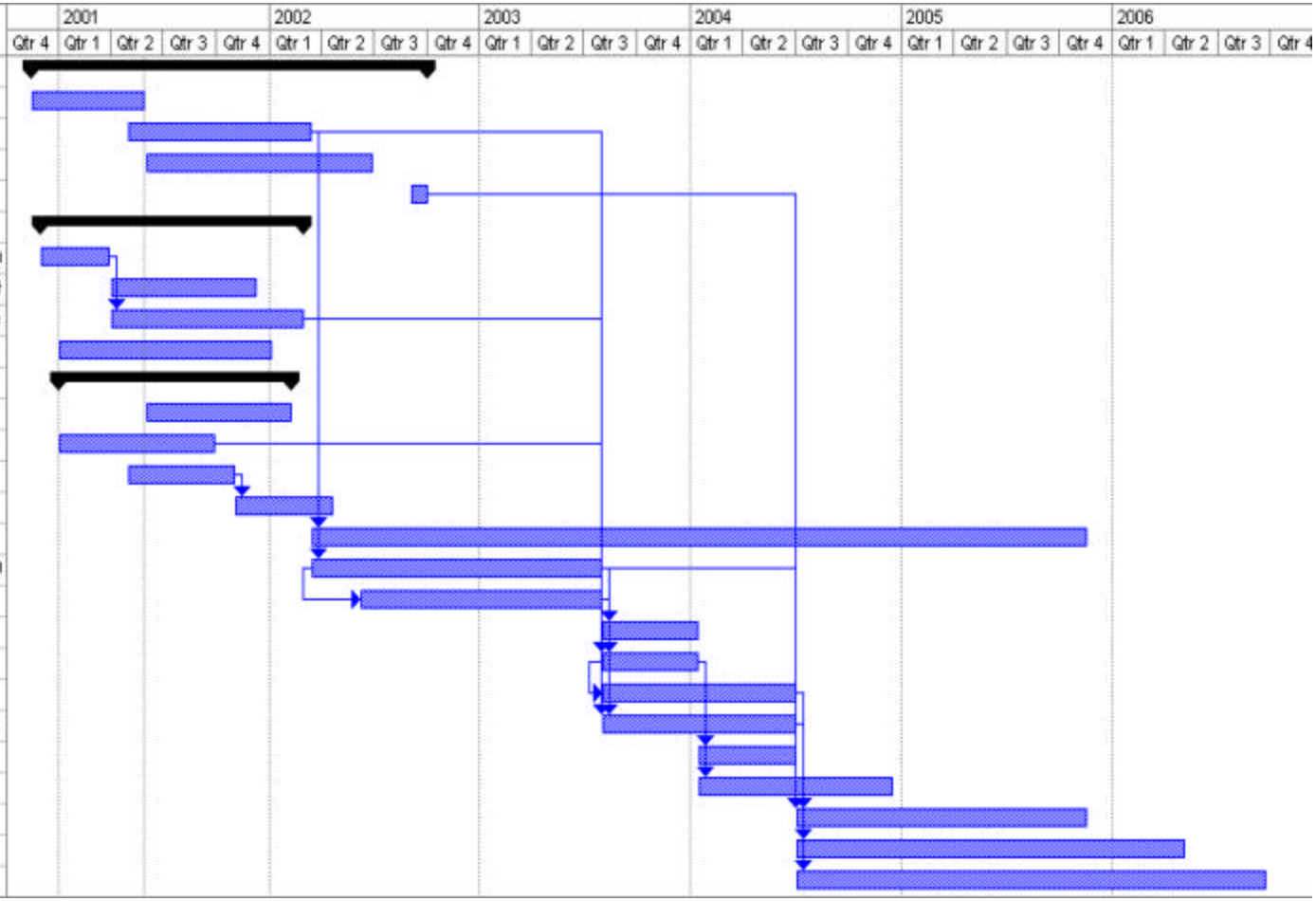
Key Activities
TECHNICAL ASSESSMENT
ILC PoC
SRAC

GCSS-MC Responsibilities



Integrated Schedule

ID	Task Name
1	**SRAC**
2	Phase 1 Process
3	Transportation, Supply, Maintenance
4	Health, Acquisition, General Engineering
5	Cross Domain Integration
6	**ILC OA**
7	High-Level Operational Architecture (to-be) fo
8	Technical Assessment of the Operational Arcl
9	Develop the Detailed to-be Operational Archite
10	Requirements Generation-External Pilots, ACTDs,
11	**SDE**
12	Pilots
13	Data Standardization
14	ILC Proof of Concept
15	Portal Development
16	Requirements Development and Management
17	Technical Solutions Hypothesis Development and B
18	Infrastructure Pilots
19	Technical Solution Construction
20	Integrated Database Development
21	Applications Development - TAV
22	Applications Development - Supply & Maintenance
23	GCSS Data Integration
24	Datawarehouse Development
25	Applications Development - Other CSS Functions
26	Integration Testing, Enterprise Stress Testing
27	Deployment and Operations



Schedule

Task costs are in $1,000's. Tasks with $0 are either assumed to be from other funding sources (ILC, FNC or other) or funded as a current program.

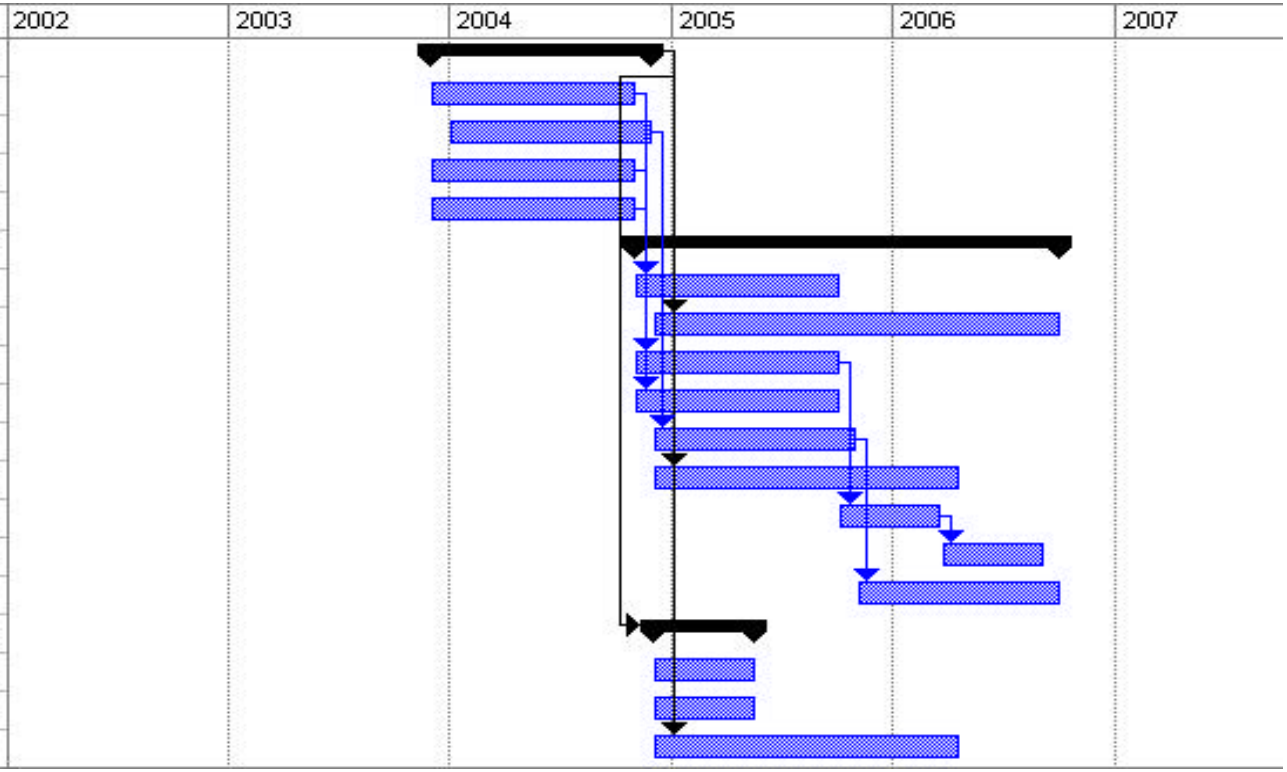
PHASE 1A primarily supports the ILC Proof of Concept (PoC).

ID	Task Name	Cost
1	**Phase 1A**	**$9,537.50**
2	RRTS Enhancement	$140.00
3	SDE Middleware Pilot	$3,240.00
4	Portal	$5,637.50
5	Trade Studies	$520.00
6	SRAC	$0.00
7	**ILC**	**$0.00**
8	Detailed OA	$0.00
9	PoC	$0.00
10	Tech Assessment	$0.00
11	Systems Architecture	$0.00
12	FDP&E Systems (JFRG II, SCM, ALPM)	$0.00
13	**Phase 1B**	**$14,320.00**
14	Order Management	$3,000.00
15	SDE Middleware - Next Version	$2,760.00
16	Portal - Next version	$4,020.00
17	Maintenance Management	$3,000.00
18	RM- Asset Management	$1,020.00
19	Systems Migration	$0.00
20	Trade Studies	$520.00
21	**Deployment**	**$29,287.50**
22	I, II, III MEF	$29,287.50

(Schedule continued on next page)

Schedule (continued)

ID	Task Name	Cost
23	**Phase 2**	**$7,560.00**
24	Warehouse Improvement	$3,000.00
25	Decision Support Systems (ONR)	$0.00
26	Service Fulfillment	$2,040.00
27	Datawarehouse	$2,520.00
28	**Phase 3**	**$14,100.00**
29	Warehouse - Deployed Capability	$1,080.00
30	Transportation (TC AIMS II)	$0.00
31	Purchasing and Procurement	$0.00
32	Datawarehouse - Next Version	$2,520.00
33	Decision Support Systems (tactical, otl	$2,400.00
34	Autonomic Logisitics	$3,060.00
35	Personnel Systems Intergration	$240.00
36	Depot Systems Integration	$240.00
37	Engineering DSS	$2,040.00
38	**Non-USMC Systems Integration**	**$1,440.00**
39	Health Integration	$240.00
40	Depot	$1,200.00
41	Forecasting/Planning Systems	$1,080.00



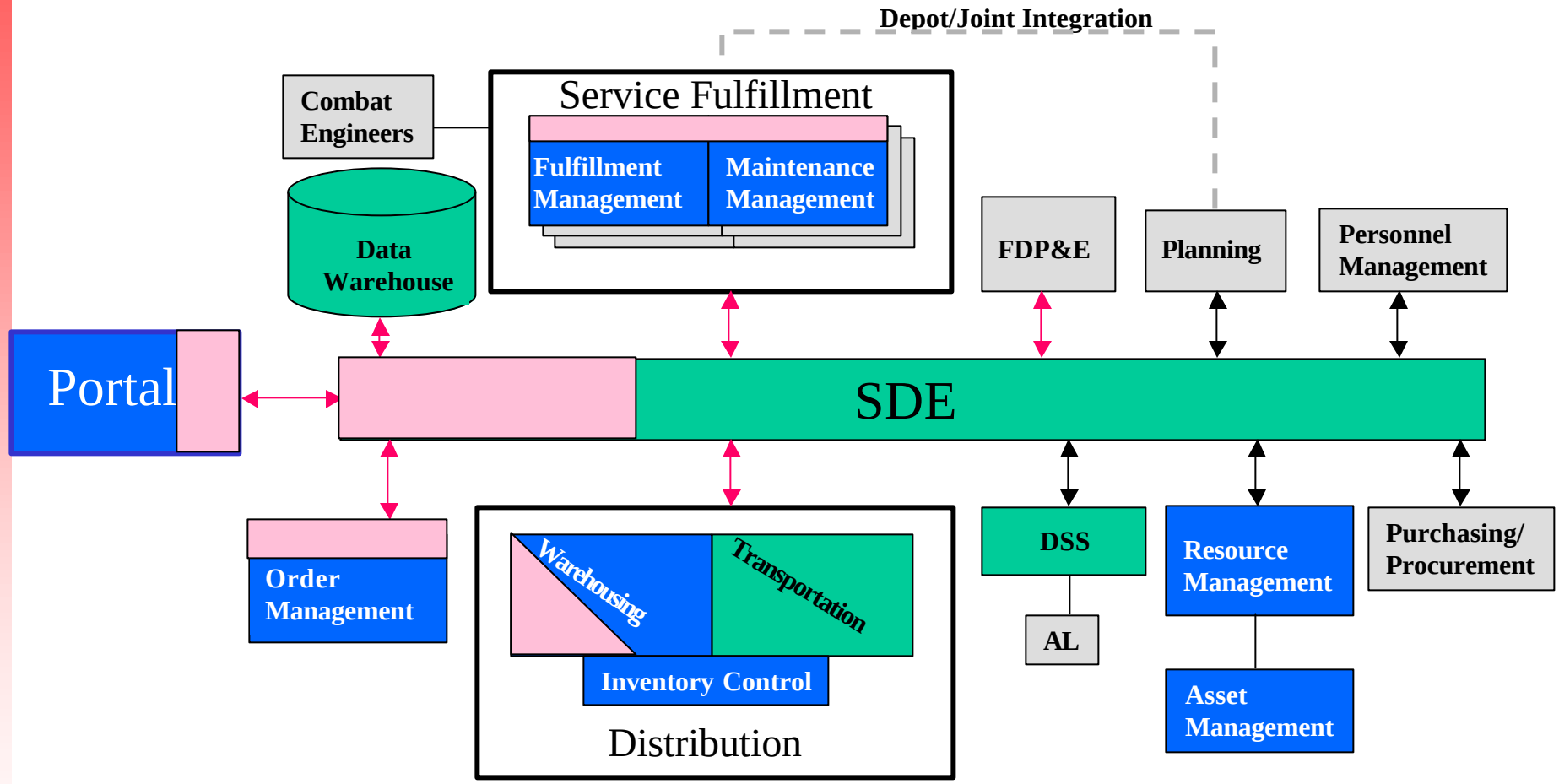
GCSS-MC Functional Architecture Capabilities by Description and Dependencies

CAPABILITY/ TASK	FISCAL YEAR	DESCRIPTION	DEPENDENCIES
SDE-EAI-Order Management Demonstration	2002	Critical to Concept Validation of ILC and GCSS-MC Architecture;	ILC Proof of Concept, Cross Functional Viev of Information; Unfunded
Portal Prototype	2002	Initial Demand Generation and Service Fulfillment Capability linked to SDE-EAI-Order Mgmt Demonstration	Supports ILC Concept Validation And GCSS MC IOC; Collabortive Partnership with PM LA
Warfighter Portal	2003	Single Point Of Entry for Products and Service Requests; Integration of Enterprise Portal framework provides architecture foundation.	Linked to Portal Prototype.
Order Management	2003	Demonstrates Ability to pass requirement for product or service to a resource provider using; Major component for USMC future state	All capabilities are dependent on architecture tested during the prototype in FY 2002
Maintenance Management	2003	Component of Service Fulfillment	Requires upgrade to A2P and/or COTS package
Fulfillment Management	2003	Component of Service Fulfillment; Workflow, control, and coordination of the delivery of services and materials	Necessary to manage the flow and execution services
Resource Management	2003	Financial Management Component that integrates with financial systems	Links to SABRS and others
Warehousing	2003	Component of Distribution; Management of assets including receipt, store, and issue functions at physical locations	Upgrades existing Stratis capability
Inventory Control	2003	Component of Distribution; Capability currently available with A2P; The activities and techniques necessary to maintaining the desired level of items	Requires upgrade to A2P and/or COTS package
Asset Management	2003	Component of Resource Management; Total picture of an organization's assets including property control and financial reporting	Links to Resource Management and Distribution (Warehousing and Inventory Control)

GCSS-MC Functional Architecture Capabilities by Description and Dependencies

CAPABILITY/ TASK	FISCAL YEAR	DESCRIPTION	DEPENDENCIES
Decision Support Systems (DSS)	2004	Tools that support the CSS Commander's decision making process. Includes Situational awareness and mission planning	Integration of ONR funded Log C2 Tools; Upgrades to SUL in Near Term
Shared Data Environment (SDE)	2004	The technical platform where timely, accurate, and synchronized information is made available to persons and applications authorized access.	Major Capability to Satisfy GCSS MC Implementation; Requires Middleware Produ to satisfy current Vision
Data Warehouse	2004	Major component of the SDE. Provides data for historical analysis	Requires ILC Based business rules for population
Transportation	2004	Integration of TCAIMS II	Required to Satisfy Distribution Capability
Autonomic Logistics (AL)	2005	Provides Asset Visibility, Situational Awareness and Materiel Readiness For Combat Essential Items and the MAGTF Commander.	Linked to Improved Communication and Upgraded Data Collection and ONR Funded efforts in FY02-04
Combat Engineering Tools	2005	Documented Gap in GCSS MC Baseline, Component to Service Fulfillment Capability	Supports Major Business Improvement in Required Combat Support Function
Force Deployment Planning and Execution (FDP&E)	2005	Integration of AALPS, ICODES and Planned Enhancements for C2 and JFRG II	Current Legacy Systems Require Improvem
Service Fulfillment	2005	Integration of other doctrinal services; (exchange, legal etc…)	COTS Implementation Anticipated, Links Product & Service Availability;
Personnel Management	2005	Integration & Availabilty of Manpower Data Key to Improved FDP&E Functions; TFDW and MCTFS	Collaborative Partnership with M&RA begins FY 02
Marine Corps Depot Systems Integration	2005	Provides Improved Throughput & Material Readiness & Supports Service FulFillment	Impacts Major Joint and Marine Corps Programs Used by USMC Depots
Health Integration	2005	Component of Service Fulfillment; Provides Near Real Time View Of Critical Warfighter Data	Implementation and integration of TMIP
Non-USMC Depot Integration	2005	Cross Functional View of Information Improves Service Fulfillment & Planning Functions	Stock Control System, etc…
Planning/Forecasting	2005	The process of setting material and product goals for the Combat Service Support organization and choosing various methods to achieve those goals	Dependent on Middleware Solution and Data warehousing
Purchasing and Procurement	2005	Provides, Improves & Streamlines Supply Chain Management, Operations, Reduces OST & CWT	Requires availablity of Standard Procuremen System & B2B Capabity

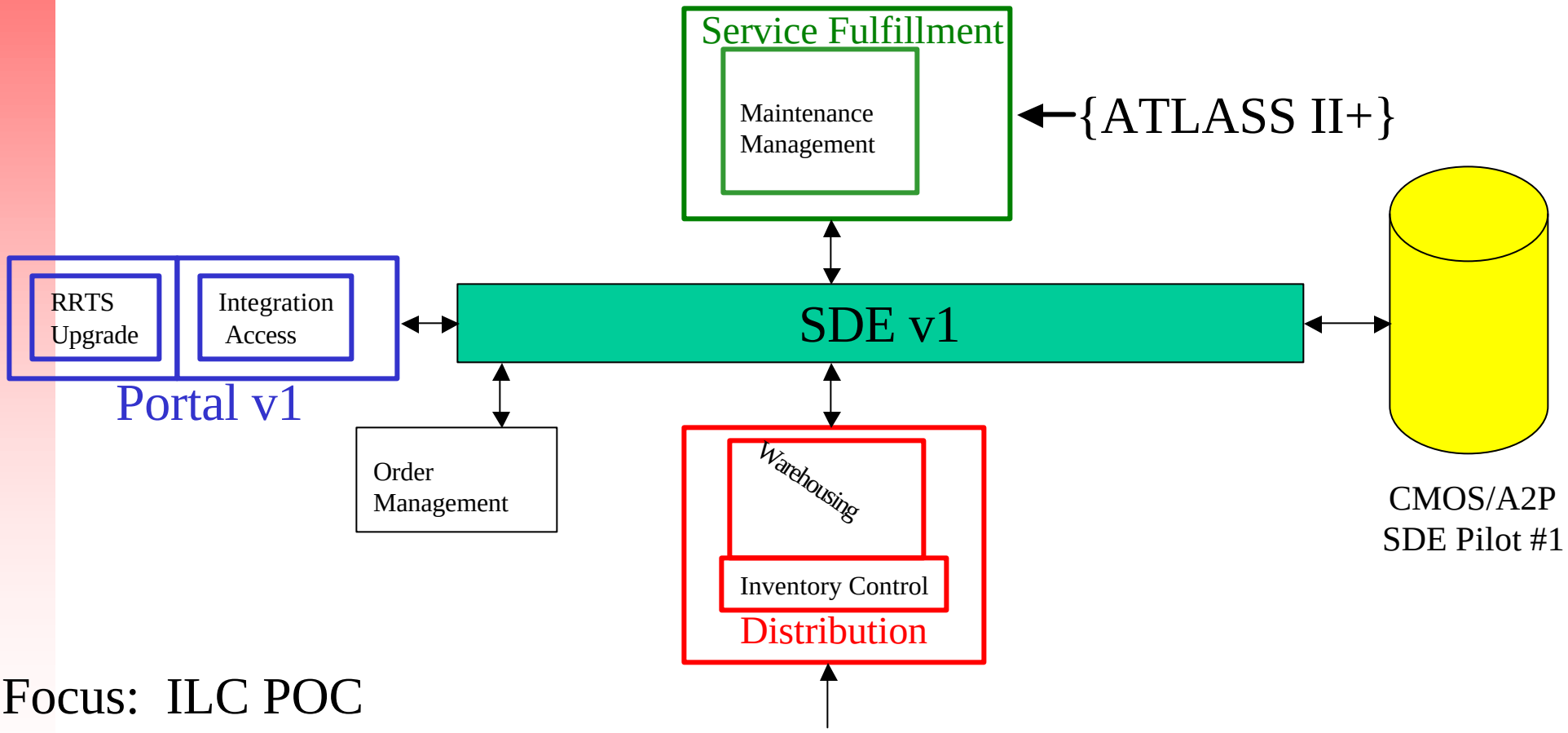
GCSS-MC Functional Architecture Capabilities Identified By Fiscal Year



Capabilities provided by end of Fiscal Year

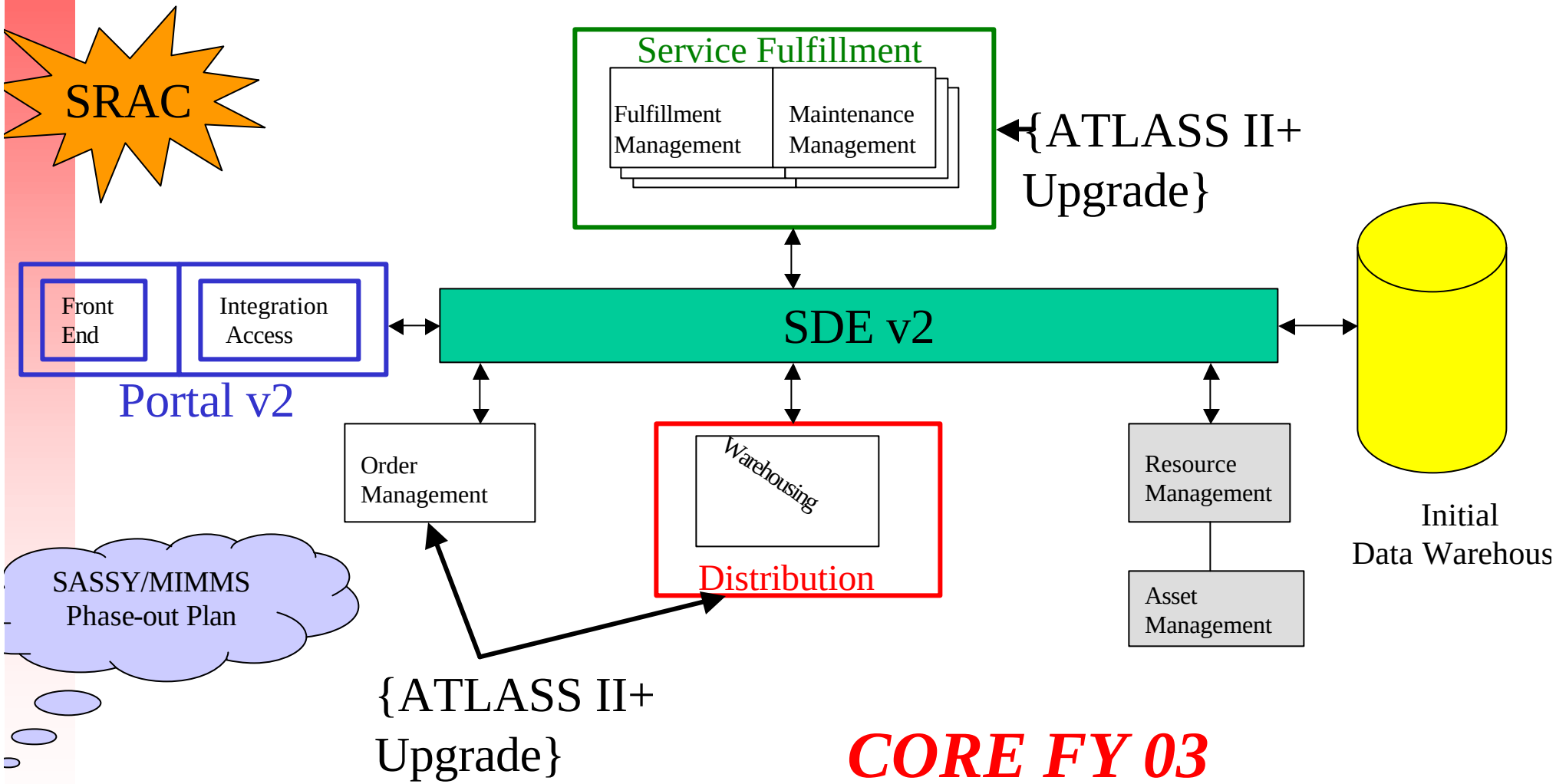
FY 02 PROTOTYPE | FY 03 | FY 04 | FY 05

GCSS-MC FY-02



Focus: ILC POC
Testing Partial OM
Other SDE Pilots

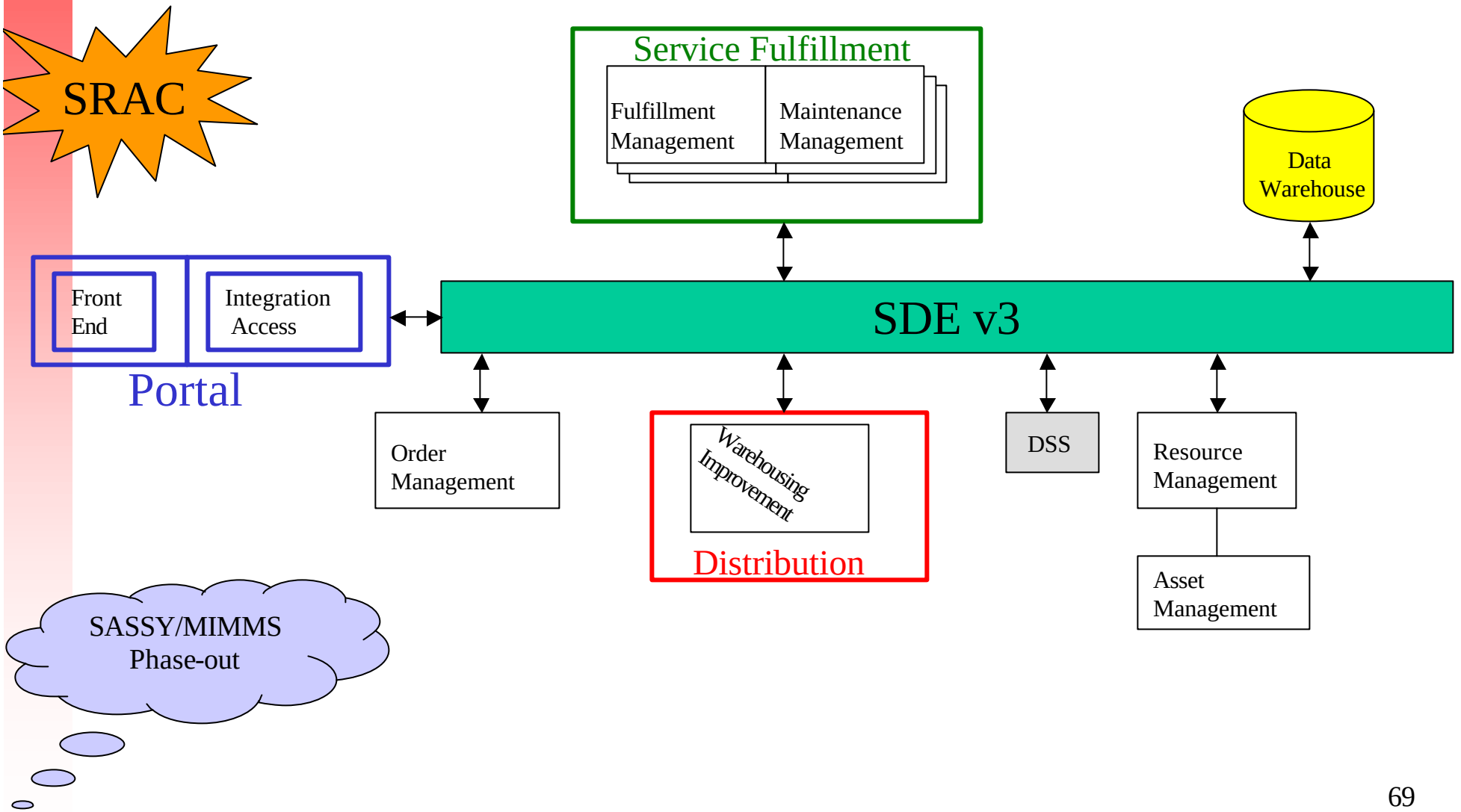
GCSS-MC FY-03



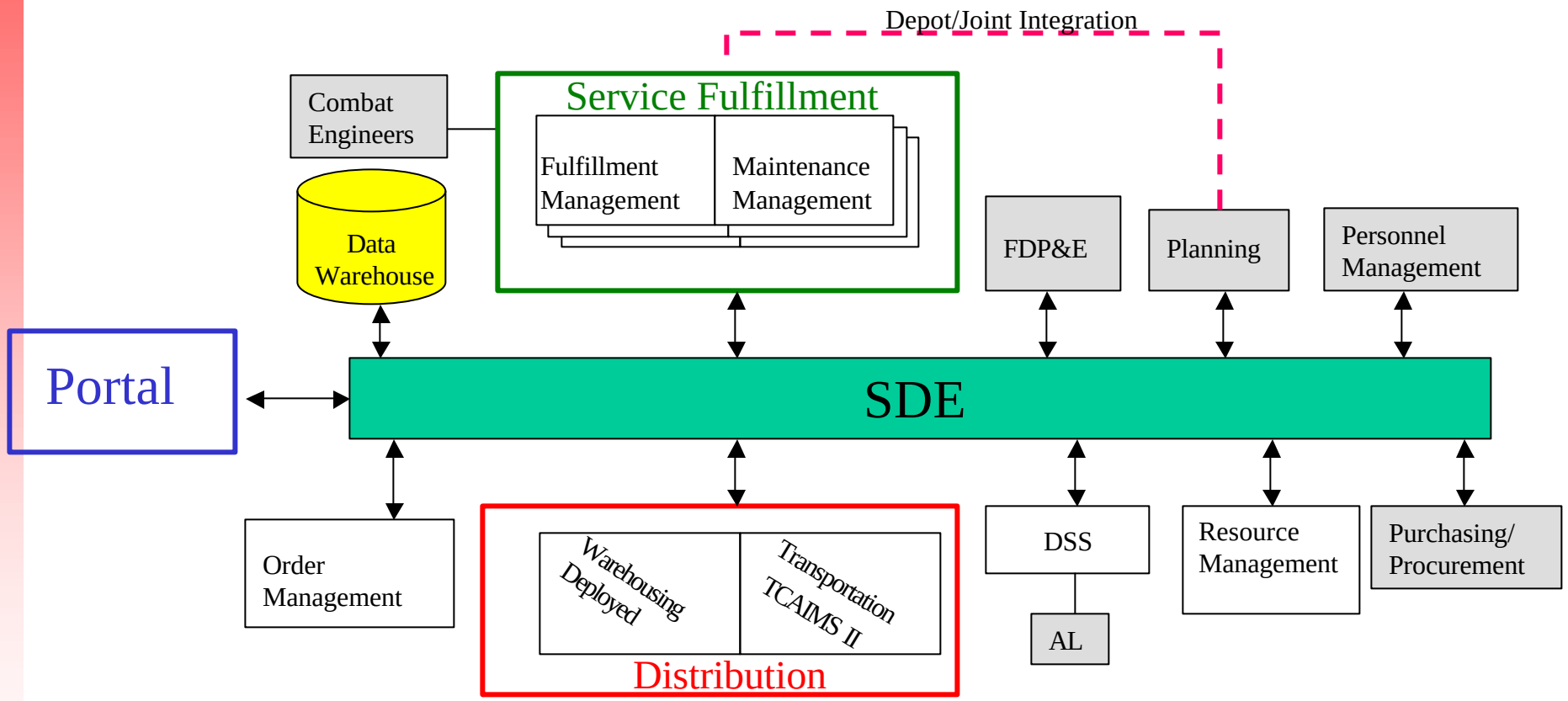
CORE FY 03

- Initially II MEF, next I, III MEF and MARFORRES
- Continuous improvement and additional capability

GCSS-MC FY 03-04



GCSS-MC FY 04-05



Produces 90% of the Functionality Required by DoD and OA

Funding Strategy

- Address FY02 and FY03 gaps
- Plan for POM 04
- Align ATLASS and SDE activities to meet GCSS-MC capabilities and timing goals
- O&M funds are “freed up” when systems are retired and replaced with new capabilities
- Funding shown does not include requirements for non-USMC systems ($10M R&D)
- ISSUE: Non-USMC systems are partially funded to meet GCSS requirements
  - These funds are not entirely discretionary
  - Some funds may derive from MCLBA systems and other sources

FUNDING

GCSS-MC FUNDING

- Mr. David Ferris, PGD IS&I, the GCSS-MC Spokesperson has assumed responsibility for implementation planning. He acknowledges, *"We have enough funding to start…our success with POM 04 will certainly determine how effectively we prosecute this DoD mandated program."*

- POM 04 funding is needed for a wide range of complex engineering activities critical to the final implementation for GCSS. The immediate challenge is to develop verifiable POM 04 submissions supported by the FA and the acquisition managers, while considering product improvements as a means of complying with GCSS-MC technical requirements.

- GCSS-MC is the designated contribution to the Global Combat Support System (GCSS) and DoD LOG IT transformation efforts. POM 04 initiatives address current gaps in IT requirements, provides funds for transition of legacy application and addresses resource shortfalls in core programs.

- POM 04 submissions are required for programs of record enhancements, GCSS-MC compliancy and new initiatives. GCSS-MC POM 04 will address a portfolio management strategy based on the following:
  - Programs of record enhancements – programs requiring additional funds to satisfy requirements not directly associated with GCSS-MC.
  - GCSS-MC compliance – funding necessary to transition programs to satisfy GCSS-MC requirements (systems modernization).
  - New initiatives – new programs to satisfy GCSS-MC gaps (combat engineering tools, autonomic logistics, logistics portal, CSS toolkit.)

- Specifically, GCSS-MC portfolio will address gaps identified by the GCSS Capstone Requirements document for asset visibility and logistics decision support tools. The GMT is responsible for preparing POM 04 portfolio documentation. In the event POM 04 requirements are not funded, the impact will cause the Marine Corps to fail in achieving DoD mandated transformation goals. Also, it will cause inefficient, non-deployable legacy applications to continue a substantial draw down on available funding.

- GCSS-MC portfolio provides a Web-based infrastructure for new and selected legacy logistics applications.

GCSS-MC Estimated R&D Costs

Task	FY02	FY03	FY04	FY05	FY06	Total
SDE-Middleware-Order Mgmt Pilot	$3,240 (Pilot)	$2,760 (Implement)				$6,000
Portal	$5,637 (Dmd & EIF)	$4,200 (EIF)				$9,837
Trade Studies (Product Selections, etc.)	$520	$520				$1,040
ILC POC (RRTS Enhancement)	$140					$140
Order Management		$3,000				$3,000
Maintenance Management		$2,175	$825			$3,000
RM- Asset Management		$1,020				$1,020
Warehouse		$275 (Impr)	$2,923 (Impr.)	$882 (Deployable)		$4,080
Decision Support Systems	ONR	ONR	$240 (C2 ONR integration)	$2,542 (Tact., others)	$1,657 (Eng)	$4,439
Service Fulfillment		$187	$1,853			$2,040
Datawarehouse		$231	$2,751	$2,058		$5,040
Autonomic Logistics	ONR	ONR	$204	$2,218		$2,422
Personnel Systems Integration				$130	$110	$240
Depot Systems Integration					$240	$240
Health Integration				$240		$240
Non-USMC Depot Integration				$240	$960	$1,200
Forecasting/Planning Systems				$850	$225	$1,075

Funding Summary
All Categories

USMC SYSTEMS	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
GRAND TOTAL	$11,175	$23,699	$24,587	$26,101	$26,044	$21,375	$132,981
Shortfall	$1,029	($5,770)	($10,404)	($10,644)	($11,789)	($16,099)	($53,677)

Lowest cost to meet requirements within GCSS-mandated timeframe.

Strategy extends the schedule to reduce PMC and O&M costs

R&D funding is the pacing category. Estimates show funding for USMC systems ONLY to satisfy ILC/GCSS compliance

Funding Summary (R&D)

Other alternatives are for illustration.

System (R&D)	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
SDE	$4,947	$6,630	$4,945	$4,250	$4,386	$4,474	$29,632
ATLASS (C2510)	$3,690	$3,640	$0	$0	$0	$0	$7,330
TOTAL	$8,637	$10,270	$4,945	$4,250	$4,386	$4,474	$36,962
NEED							
Alternative 1	$18,500	$13,700	$9,200	$4,000	$70		$45,470
DELTA	*($9,863)*	*($3,430)*	*($4,255)*	*$250*	*$4,316*		*($12,982)*
Alternative 2	$10,900	$16,000	$8,000	$8,300	$2,100		$45,300
DELTA	*($2,263)*	*($5,730)*	*($3,055)*	*($4,050)*	*$2,286*		*($12,812)*
Current Strategy	**$9,600**	**$14,100**	**$9,100**	**$9,800**	**$2,900**		**$45,500**
DELTA	***($963)***	***($3,830)***	***($4,155)***	***($5,550)***	***$1,486***		***($13,012)***

Funding Summary
(O&M and PMC)

PMC, O&M and schedule are closely linked. Delaying capabilities will reduce PMC and O&M.

	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
GCSS-MC PMC-Infra	$1,575	$5,199	$5,562	$2,101	$4,494	$0	$18,931
GCSS-MC PMC-Deploy	$0	$2,000	$4,000	$6,000	$8,000	$10,000	$30,000
TOTAL PMC	$1,575	$7,199	$9,562	$8,101	$12,494	$10,000	$48,931
ATLASS PIP	$1,575	$5,199	$5,562	$5,101	$4,494	$0	$21,931
464100 (MAGTF CSSE&S	$1,992	$2,460	$1,742	$2,238	$1,130	$1,630	$11,192
Shortfall	$1,992	$460	($2,258)	($762)	($6,870)	($8,370)	($15,808)
O&M NOTE:	Scen #3. O&M is assumed to be 25% of development (R&D) costs/year						
	Assumes funding from Programs of Record asthey are migrated to GCSS-MC						
	FY02	**FY03**	**FY04**	**FY05**	**FY06**	**FY07**	**TOTAL**
GCSS-MC O&M	$0	$2,400	$5,925	$8,200	$10,650	$11,375	$38,550
ATLASS & A2P PIP			$1,934	$3,868	$4,245	$3,646	$13,693
Shortfall	$0	($2,400)	($3,991)	($4,332)	($6,405)	($7,729)	($24,857)

Funding Issues and Risks

- Work must start now, but no new funding until FY04
- Current planning shows $13M R&D shortfall
- Different COA's may be used to push out capabilities across the FYDP reduce funding shortfalls
- No Risk contingency funds are identified to compensate for the ROM estimates
- Non-USMC programs require more analysis to address

WARFIGHTER PORTAL

WARFIGHTER PORTAL

- The Warfighter Portal is the second critical component for the successful implementation of the GCSS-MC.
- When available in an enterprise configuration, the Warfighter Portal will provide access to a full scope of enterprise CSS function as well a government and commercial e-business activities.
- The design, development and fielding will occur over a four year period with IOC for GCSS-MC occurring in FY 04.
- Approximately $140k was provided by the ILC Director to provide enhancements to the existing Rapid Requirements Tracking System (RRTS) Portal. The objective for this funding is to export the product from Cold Fusion and to provide greater flexibility and scalability fo an enhanced portal.
- The RRTS Portal will be used to support a planned ILC POC scheduled for Camp Lejeune during October 01 to early June 02. The RRTS Portal will be used to accomplish service fulfillment for product and order management using a commercial enterprise application integratic middleware (VITRIA). The upgrade of the RRTS Portal will be accomplished by SAPIENT Corporation who will design, develop and deploy the demonstration product.
- Current planning suggests an aggressive seven-week effort to evaluate Enterprise Integration Portals (EIP) to be used as an enterprise solution. The EIP will be determined using trade analysis strategies, with the primary focus being on COTS and GOTS products. Supporti the trade analysis will be an Acquisition Strategy and a Post-Deployment Support Plan. The ILC and GCSS MC developed a Functional Specification as joint product. The portal strategy is to use the selected EIP product as the enterprise solution for front-end requirements an integrated access.
- The EIP Portal will satisfy GCSS-MC requirements for IOC during FY 04. The contracting strategy for the EIP will be to conduct a selective competition based on technical solutions provided in response to an industry day information exchange.. Close coordination is required with the manpower initiatives (TFDW; TFSMS) to re-use technologies, processes and implementation strategies.

Warfighter Portal

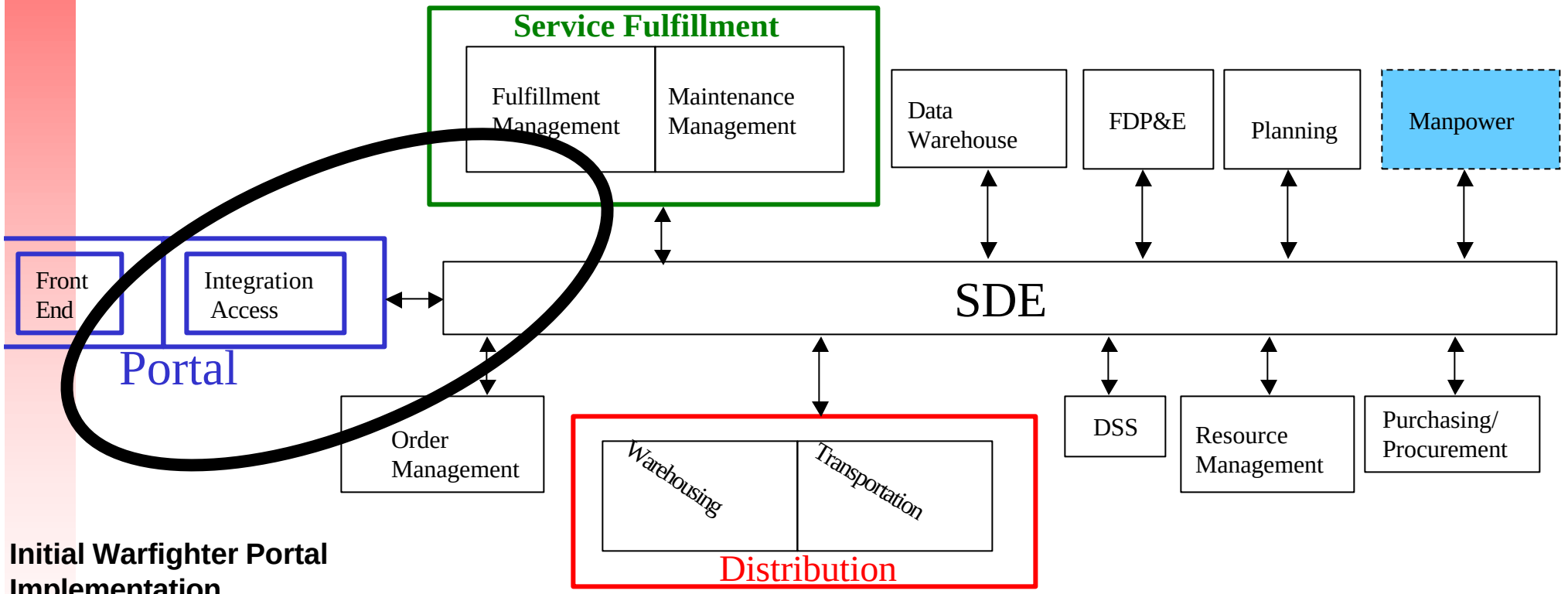
- Global Access to a Full Scope of Enterprise CSS Functions, and Government and Commercial E-business Information Repositories and Activities

- Enables Operating Forces
  - Simplifies Logistics Requirements Submissions
  - Manages Cross-functional Logistics Workflows
  - Access to GCSS-MC Portfolio Applications
  - Furnishes Operational Units, Whether *Deployed* or in *Garrison*, a Gateway to Logistics Support From Organic or External Sources
  - Reduces Overhead Resources in Coordinating Logistics Requirements

Implementation Plan

- Support ILC POC With a Demonstration of ILC Workflow Via RRTS+, Enterprise Application Integration (EAI) and an Order Management Module
- Develop an EIP (Enterprise Integration Portal)
  - Develop Requirements Specification
  - Conduct Trade Analysis of COTS and GOTS Products
  - Develop Post-deployment Support Plan
- Mid Term Plan is to Integrate Demand Generation into the EIP as the Initial Capability for the Warfighter Portal

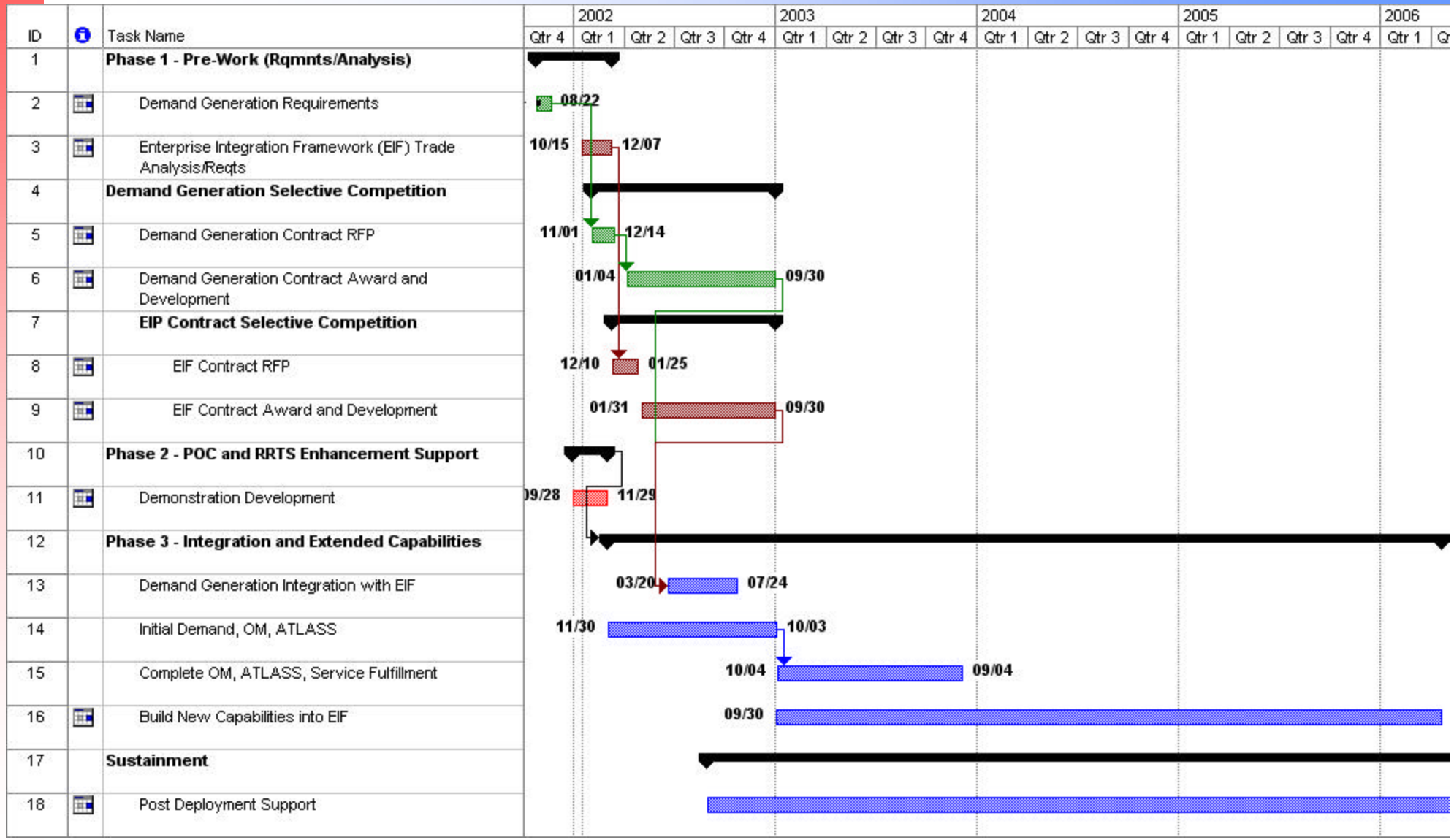
GCSS-MC Functional Architecture



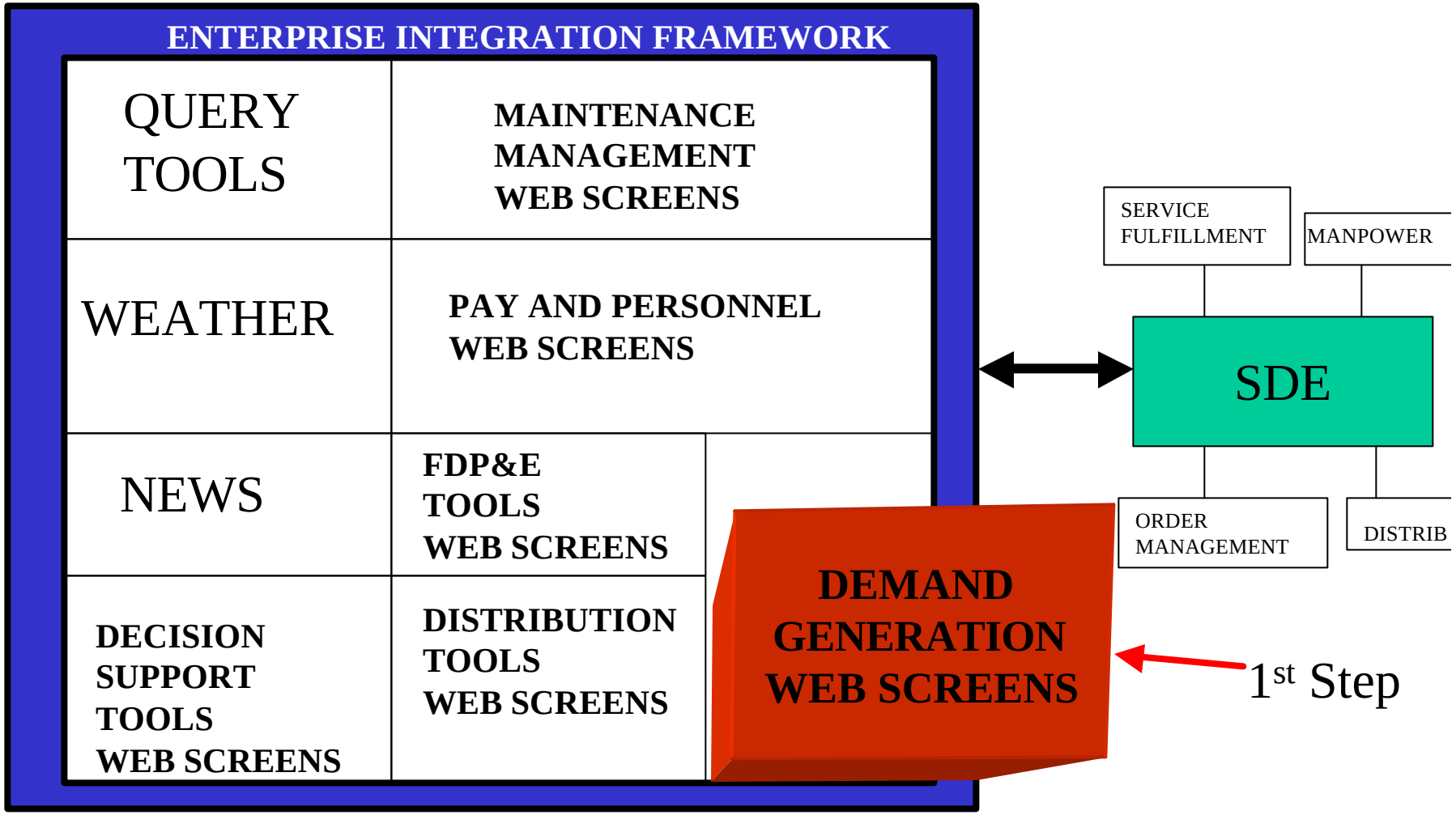
Initial Warfighter Portal Implementation

(Demand and EIP Efforts)

Warfighter Portal Schedule



Warfighter's Portal (visual view)



WEB-BASED HUMAN TO COMPUTER INTERFACE

COMMAND AND CONTROL

COMMAND AND CONTROL
(C2)

•"If I had this all to do over again, I would commit a greater effort to the C2 piece. This is where the money is made." LtGen. G.S. McKissock, April 2001.

•The availability of a robust decision support system is the key to successful situational assessment and situational awareness. The effective use of C2 enhances logistics transformation and addresses gaps in information superiority where existing processes and information systems are stovepiped, difficu to use, riddled with data errors and significant data latency. In order for logistics transformation to be responsive to warfighter needs, better situational awareness is necessary through a robust C2 capability.

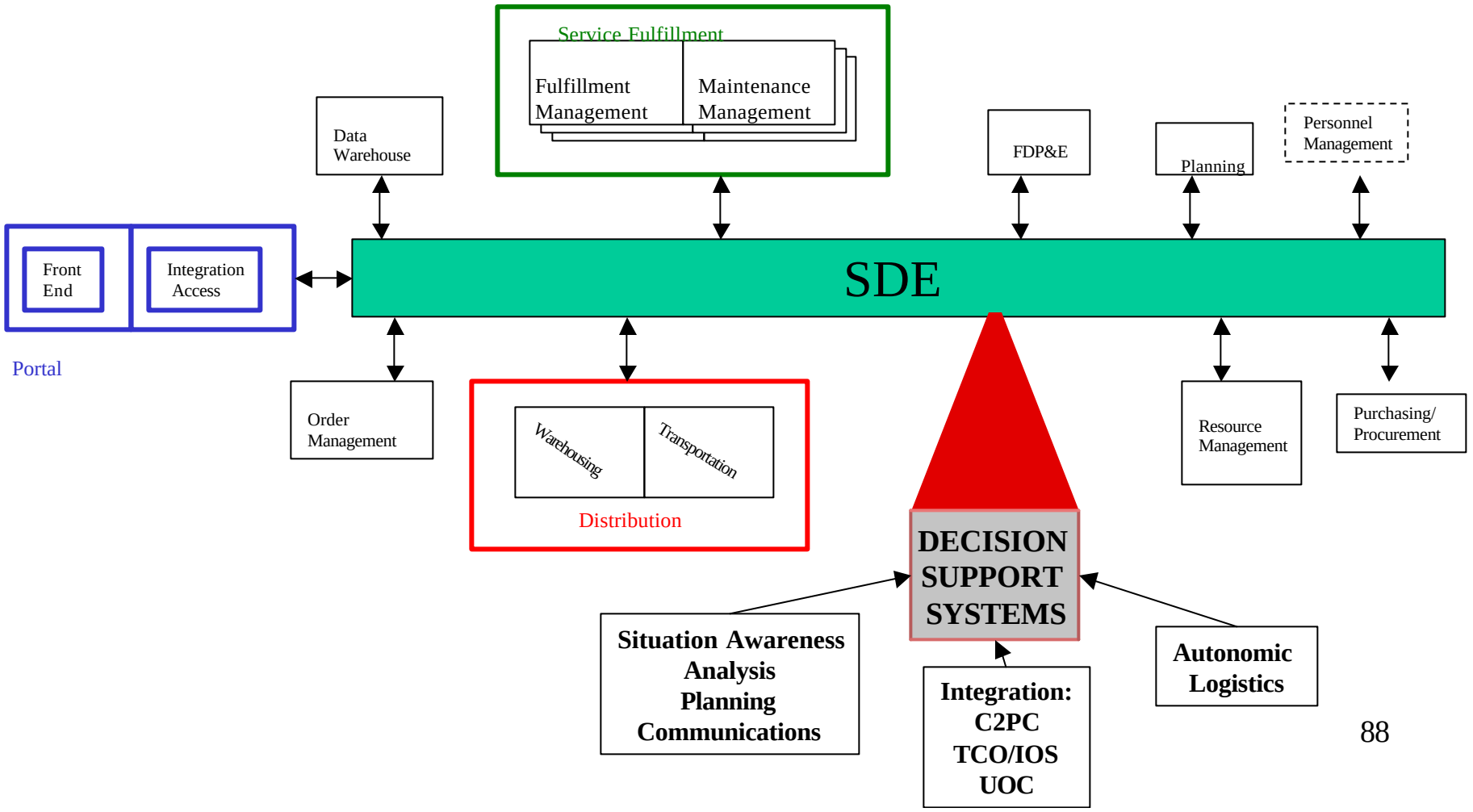
•Effective C2 design features a shared data environment and requires a smart, lightweight front-end to provide easy access to information repositories on a global scale. When fully available, C2 causes our perspective of networks, both local and wide area, to change. This change causes more consistent access to actionable near real-time information and increases the commander's capability to influence the operational picture. Deployed systems and systems support will be traded for a robust, reliable network to transmit information.

•The current capability for providing C2 is the Small Unit Logistics (SUL) ACTD. This product was recently completed and transitioned to the Systems Command for life cycle management purposes. Anticipating increased requirements; the Office of Naval Research (ONR) has recently initiated procurement activities to develop an enhanced C2 capability. Over 30 vendors responded to a call for White Papers on the C2 subject. Vendor selection results were not available as public information; however, the process was to down-select from the White Paper submissions. ONR intends to use 6.1 an 6.2 funding to accomplish prototype development.

•Recently, the FA CODE-LPV conducted a MAGTF LOG C2 Working Group at the Xerox Center, Leesburg, VA. This working group consisted of operators and planners from HQMC, the operating forces, ILC and the GMT. The working group provided 15 different perspectives for a C2 , beginning in the year 2005, extending through 2010 and culminating in 2015. The final results of this working group have not been published.

•The current strategy is to provide an enhanced capability within the following 12 months. This strategy requires an updated mission-planning tool to be provided and integrated with the first phase of GCSS-MC. This is an unfunded requirement, but the strategy capitalizes on the ONR initiative with life cycle support funding validated as a GCSS-MC gap and submitted as a POM 04 deficiency.

GCSS-MC Functional Architecture - C2 Focused



Log C2 Planning

- Near-to-Short Term (0-12 months)
  - Provide updated mission planning tool to operating forces integrated with 1st Phase GCSS-MC (*Funded via ONR EXLOG FNC*)
- Mid-to-Long Term (12-48 months)
  - Develop state of the art CSS C2 Toolkit of software and Applications. (Funded via ONR FNC)
  - Transition ONR Developed tools to GCSS-MC and integrate with other MAGTF C2 systems (CAC2S, C2PC, UOC, etc…). (POM-04 Initiative)

MCSC LOG C2 PLAN

FY 01

Concept Development

SUL ACTD

CSS C2 UNS DEVELOPED

MAGTF LOG C2 CONFERENCE

FY 02

0 → 12

Provide updated mission planning tool to operating forces integrated with 1st Phase GCSS-MC

FY 03-05

→ 48

Develop state of the art CSS C2 Toolkit of software and Applications. (Funded via ONR FNC)

Transition ONR Developed tools to GCSS-MC and integrate with other MAGTF C2 systems (CAC2S, C2PC, UOC, etc…). (POM-04 Initiative)

SHARED DATA ENVIRONMENT

SHARED DATA ENVIRONMENT (SDE)

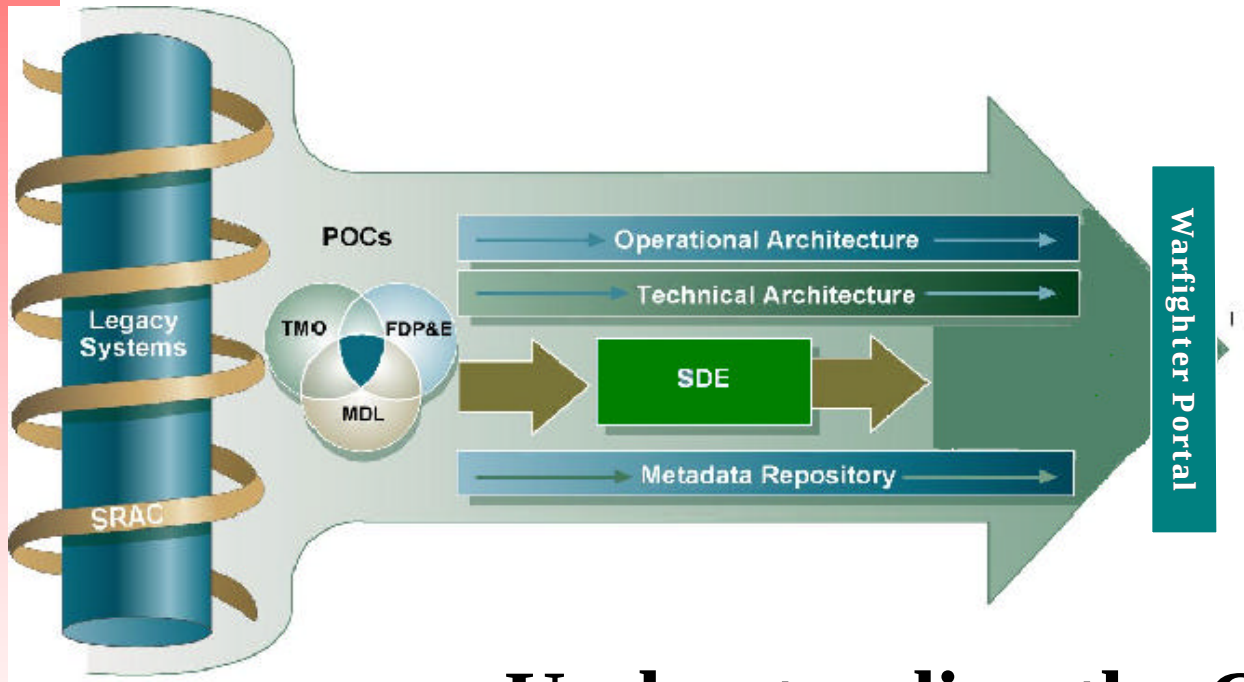
- The SDE is recognized as a critical component to the successful implementation of GCSS-MC. The SDE program is well funded and organized to support enterprise activities related to logistics transformation.

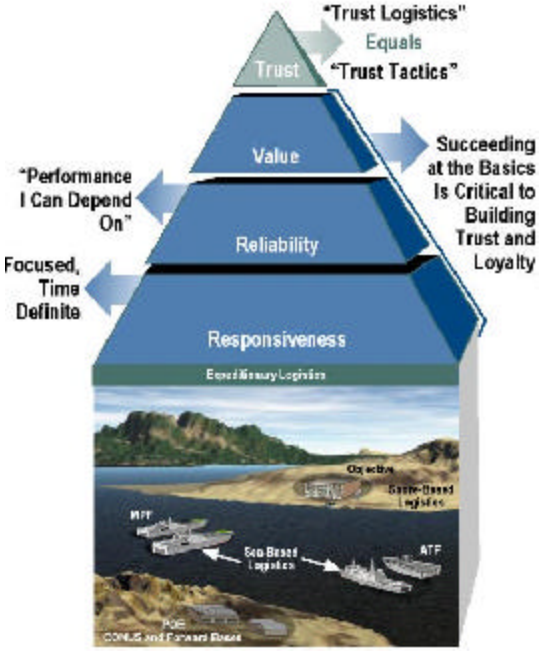
- The SDE program has recently organized three Proofs of Concept to validate the basic fundamentals of a new information technology paradigm. This concept will separate the users from the applications and separate applications from data. The Proofs of Concept are described in the following:

  - **POC 1 – TMO/Supply and Maintenance.** The demand for supply and maintenance information enterprise wide is growing daily if measured by MARCORSYSCOM PM IS "requirements" for visibility of ATLASS II+ data. Applications and supply chain managers and customers, require access to supply and maintenance data. This POC seeks to enable Application-to-Application (A2A) access to supply and maintenance data (ATLASS II+) to both the TMO community at Camp Lejeune and to HQMC personnel (where it will also support critical decision making with supply chain visibility).
  - **POC 2 – Point-to-Point system interface alternative.** Currently, 67% of AIS life cycle costs support maintenance activities. About the same percentage of that maintenance cost supports point-to-point interface solutions required because our systems DO NEED TO SHARE INFORMATION. These systems were not originally designed for enterprise wide interoperability. This POC seeks to investigate alternatives to more efficiently enable (A2A) interoperability while migrating towards an enterprise-managed systems environment specifically designed for interoperability (i.e., architecture, Data Management and Interoperability, etc.)
  - **POC 3 – Web access reference data.** The purpose of this POC is to expand access to authoritative source reference data through the "Web". For example, when any authorized person in USMC needs to know what equipment is authorized for a particular unit; there should be one (and only one) answer. The authoritative source for T/Es is MCCDCs LMIS EAF (migrating to TFSMS). Currently, the USMC logistics data d\administration program processes over 215 authoritative source reference data (e.g., UICs, DODAACs, T/Os, T/Es).

- The SDE Vision is to provide a process that ensures global, affordable and timely access to shared, reliable and secure data the enables maritime information superiority by 2005.

Understanding the Operational Support Requirements

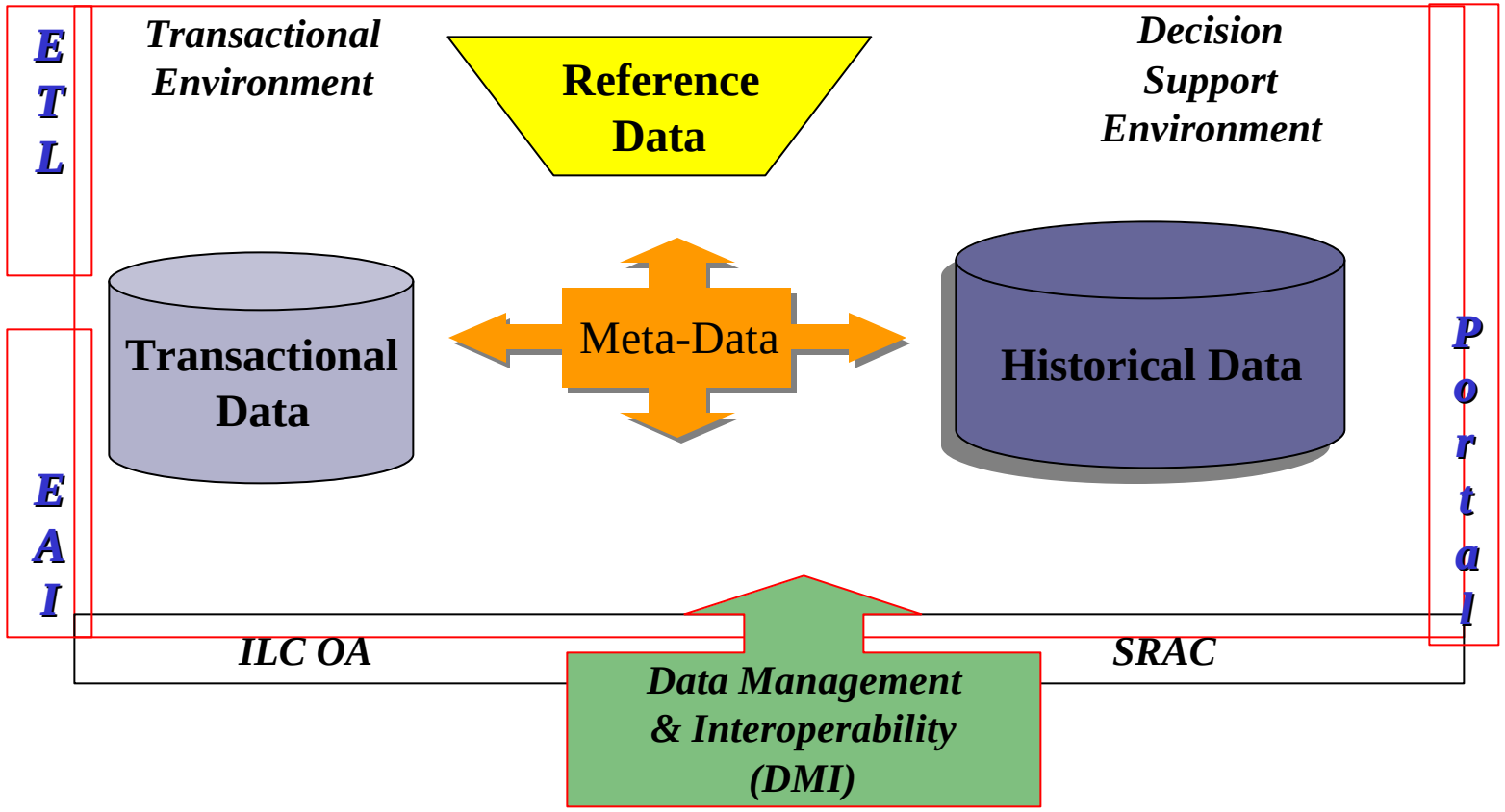




Understanding the Operational Support Requirements

"…the framework for execution of agile, responsive, effective, logistics support to the MAGTF."

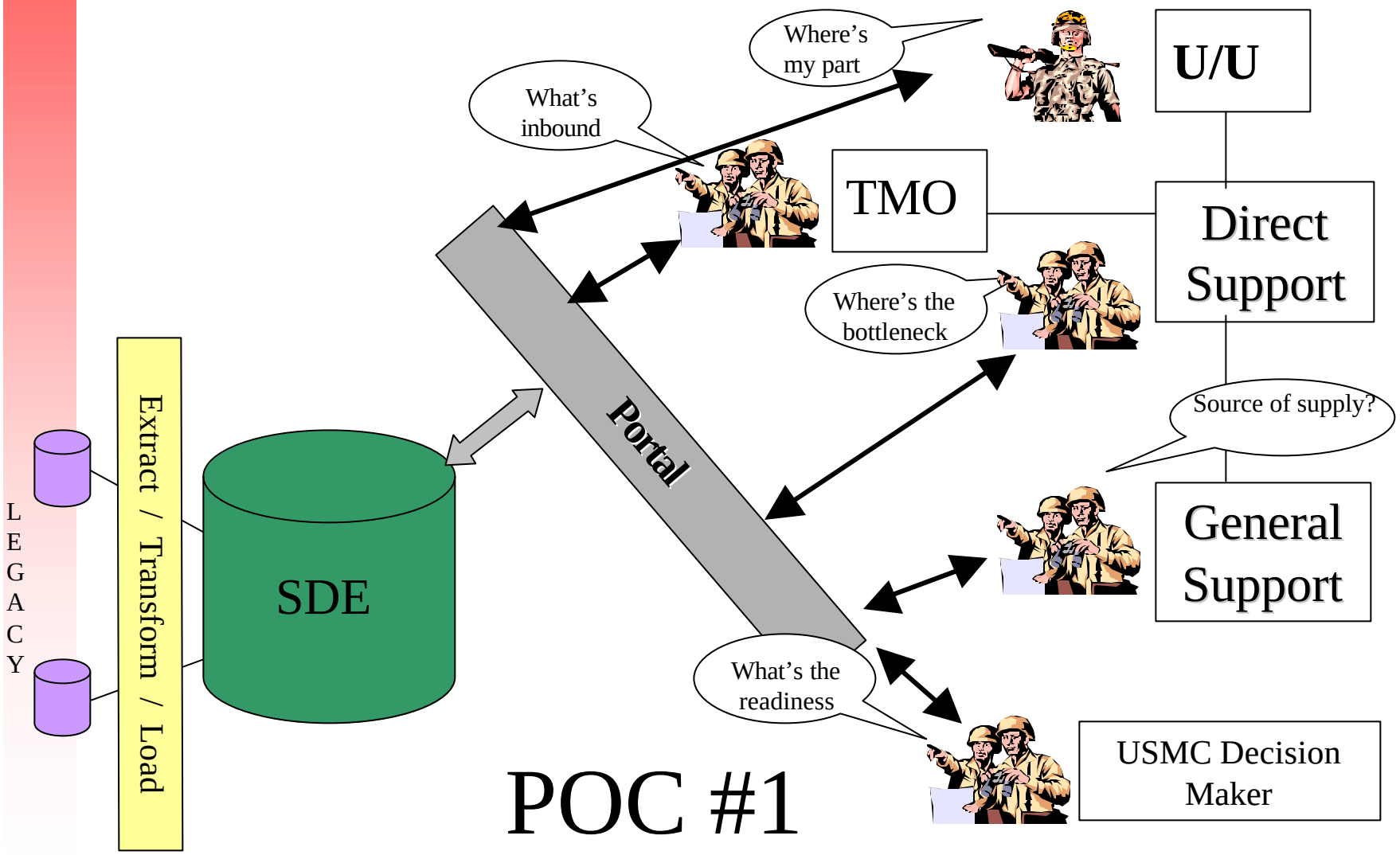
SDE


ETL
Transactional Environment
Reference Data
Decision Support Environment
Transactional Data
Meta-Data
Historical Data
EAI
Portal
ILC OA
SRAC
Data Management & Interoperability (DMI)

SDE Phase A

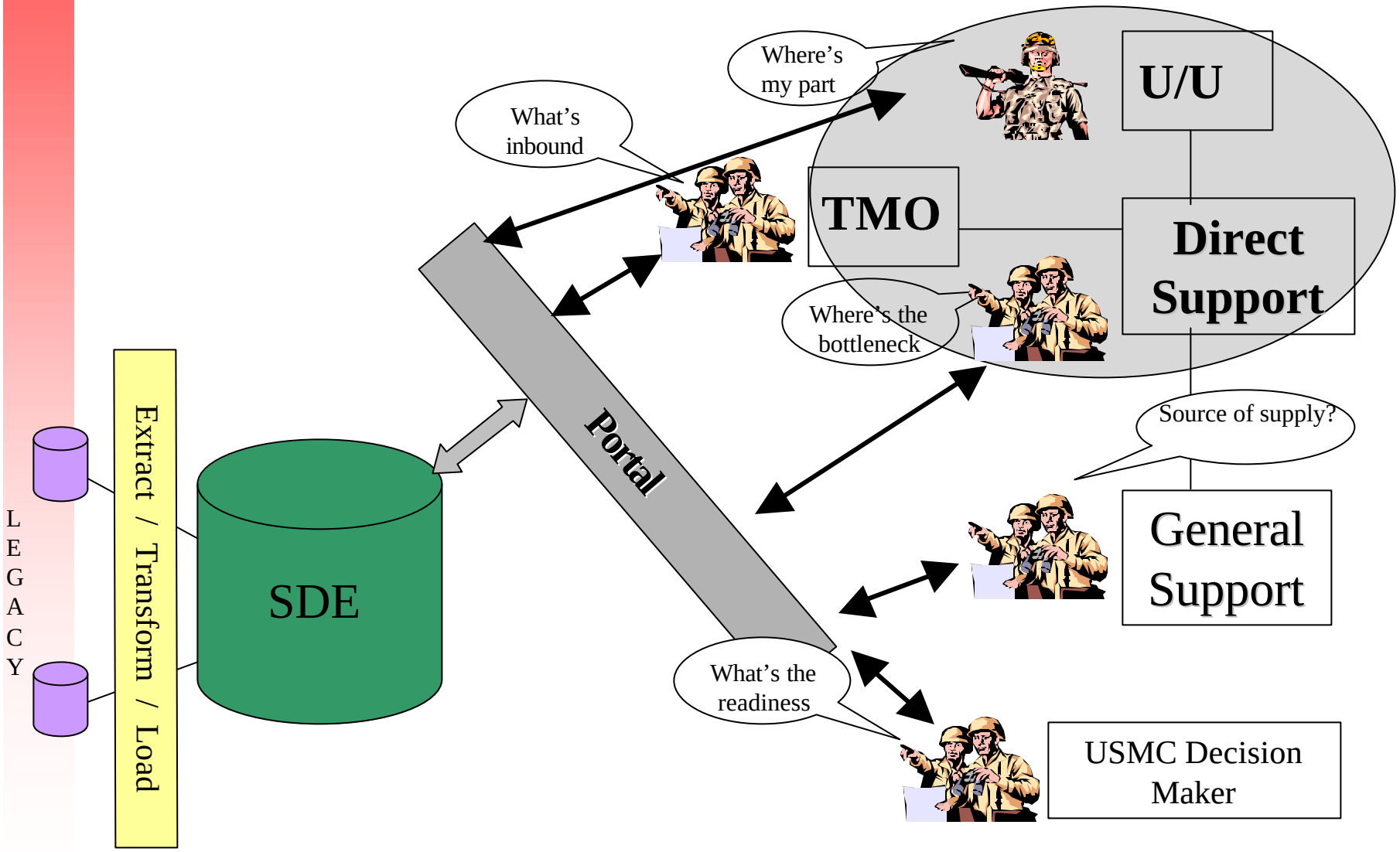
POC #1	Separate Data from Application	Historical
POC #2	Middleware-EAI	Transactional
POC #3	Enterprise wide access to Data	Reference

POC #1

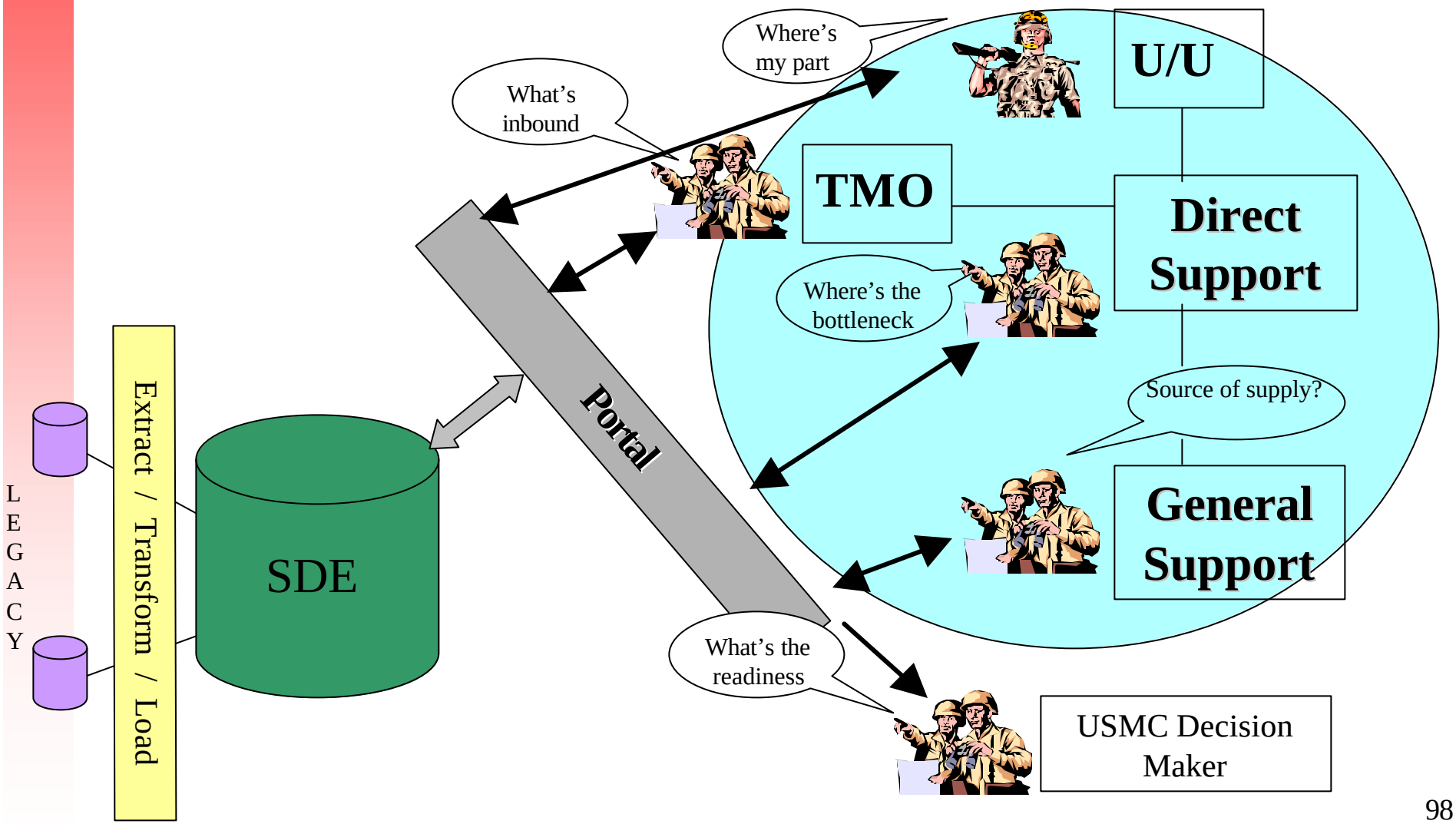

Where's my part
What's inbound
U/U
TMO
Direct Support
Where's the bottleneck
Source of supply?
Portal
General Support
What's the readiness
USMC Decision Maker
Extract / Transform / Load
SDE
LEGACY

POC #1

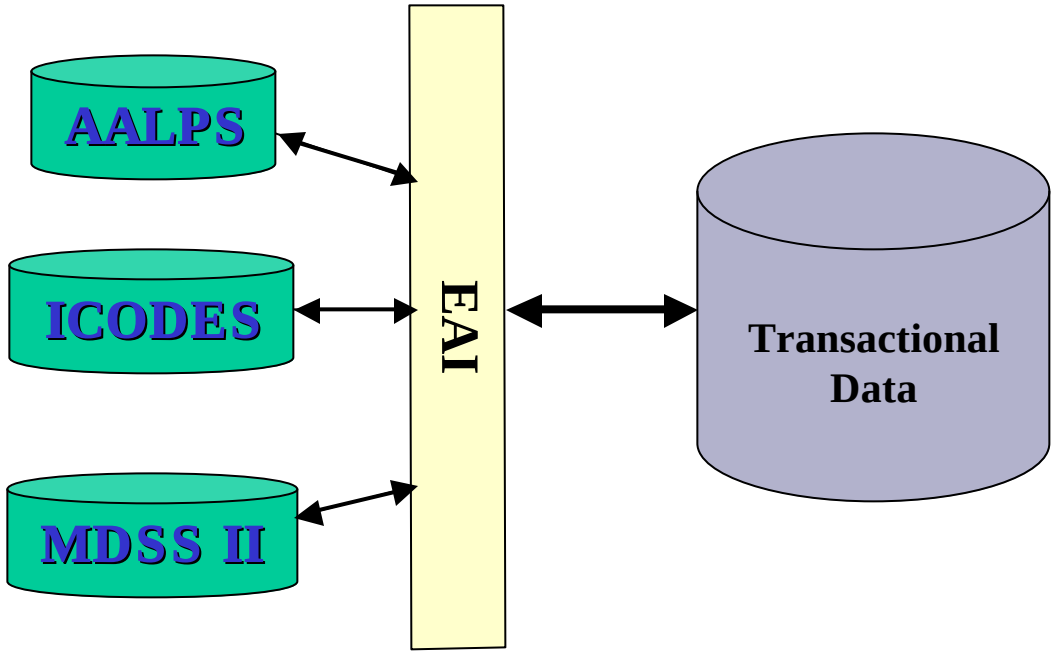
Phase A


Where's my part
What's inbound
U/U
TMO
Direct Support
Where's the bottleneck
Source of supply?
Portal
General Support
What's the readiness
USMC Decision Maker
Extract / Transform / Load
SDE
LEGACY

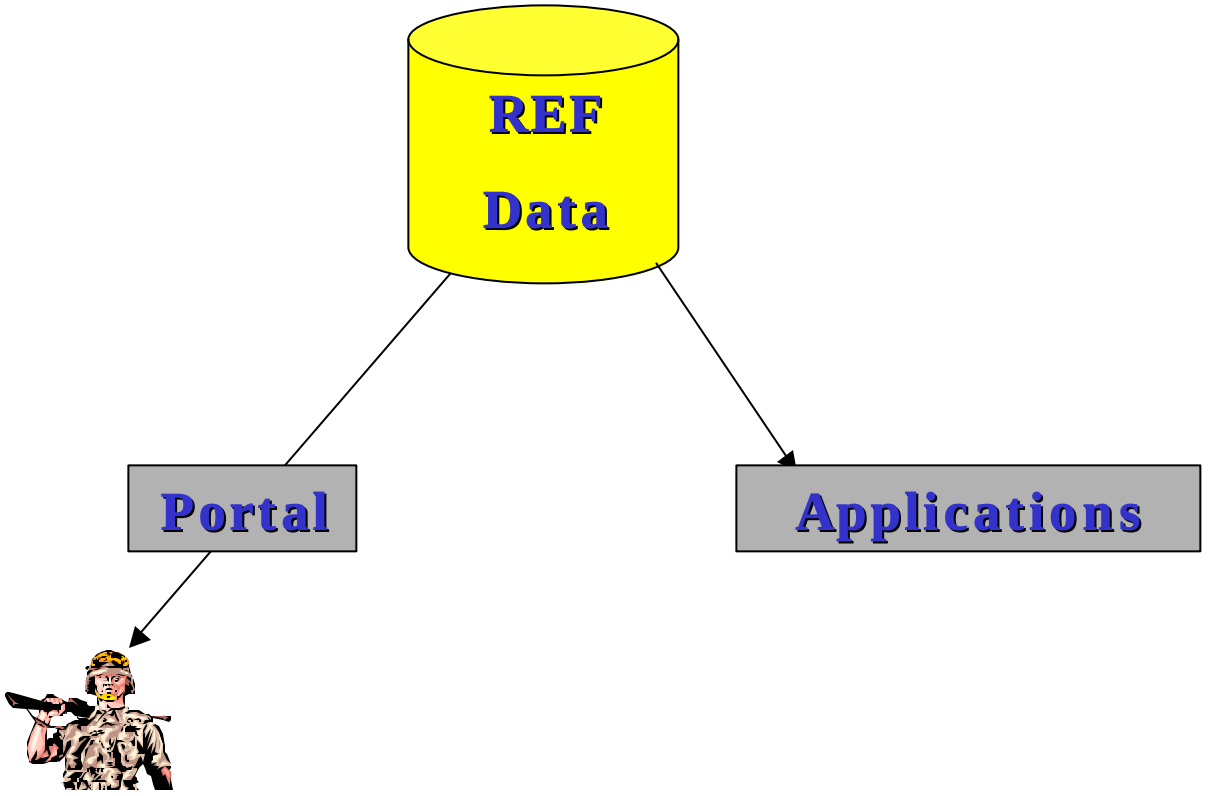
Phase B


Where's my part
What's inbound
U/U
TMO
Direct Support
Where's the bottleneck
Source of supply?
General Support
Portal
What's the readiness
USMC Decision Maker
Extract / Transform / Load
SDE
LEGACY

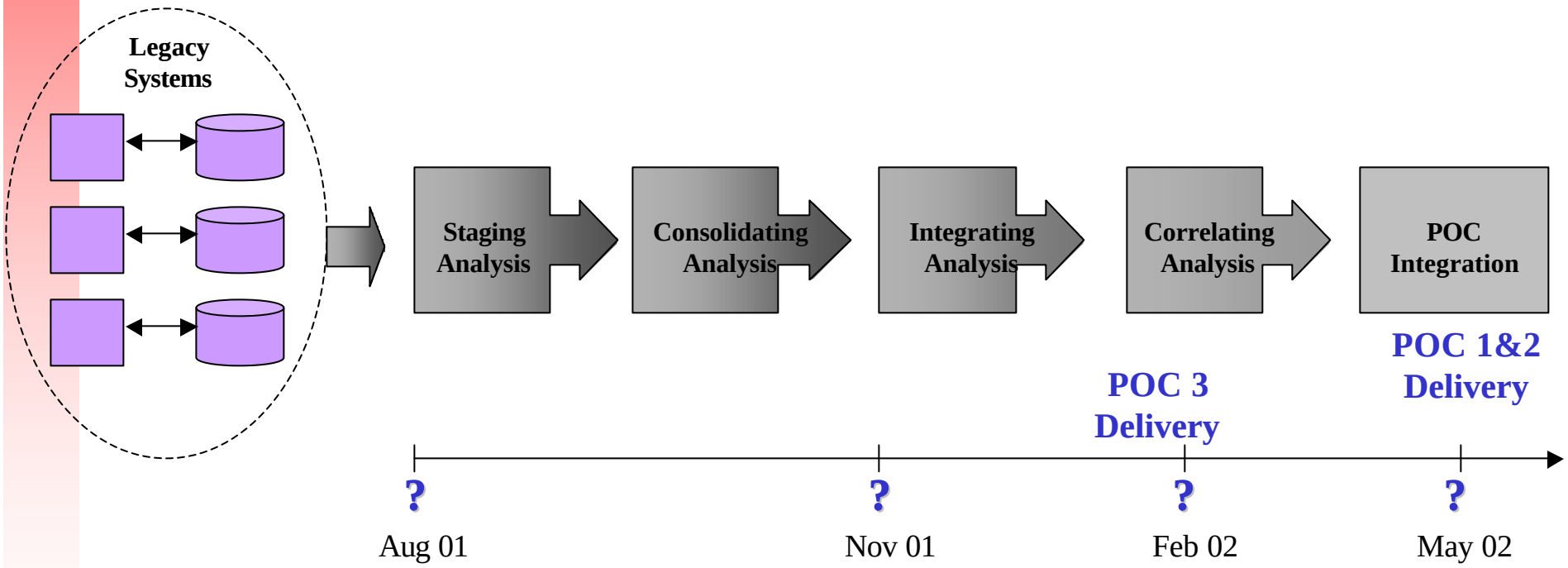
POC #2



POC #3

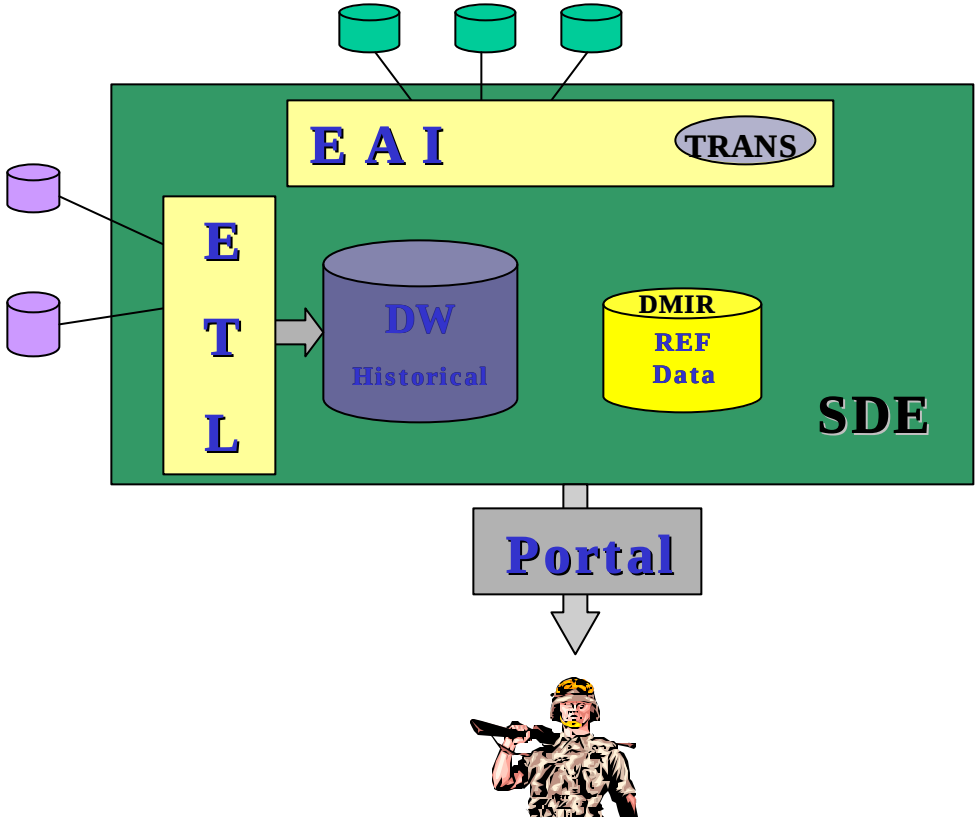


Data Transformation

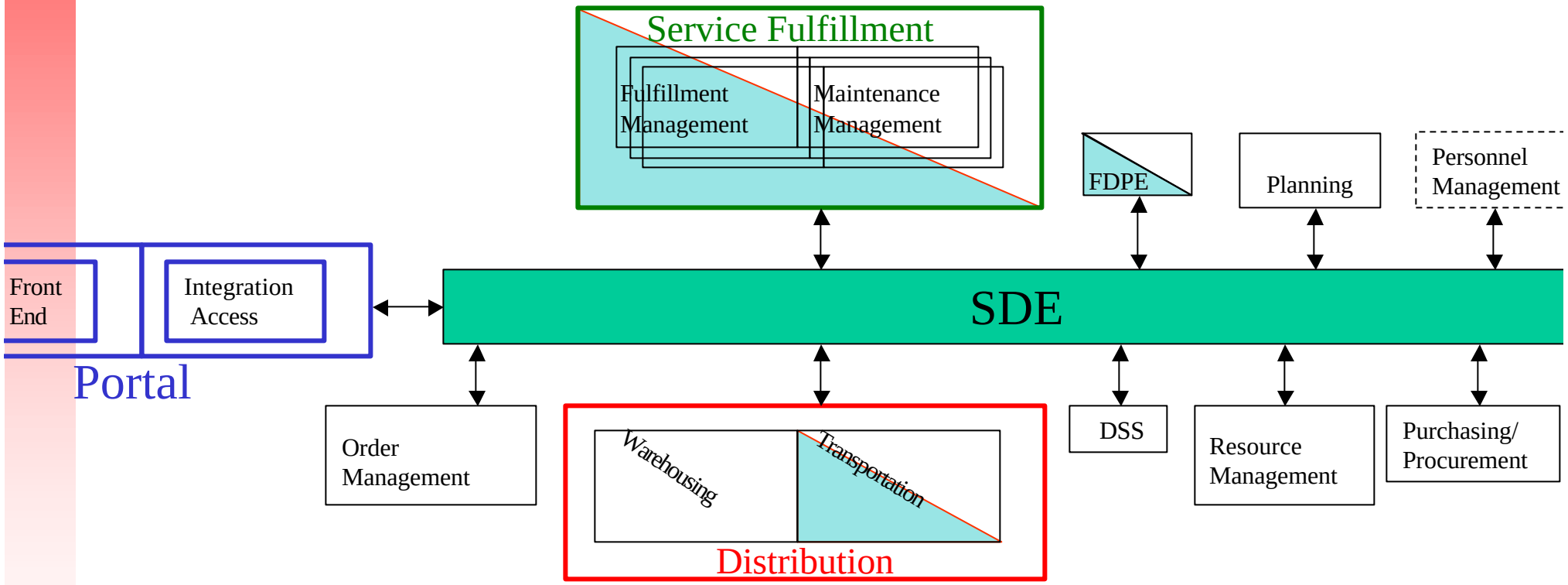


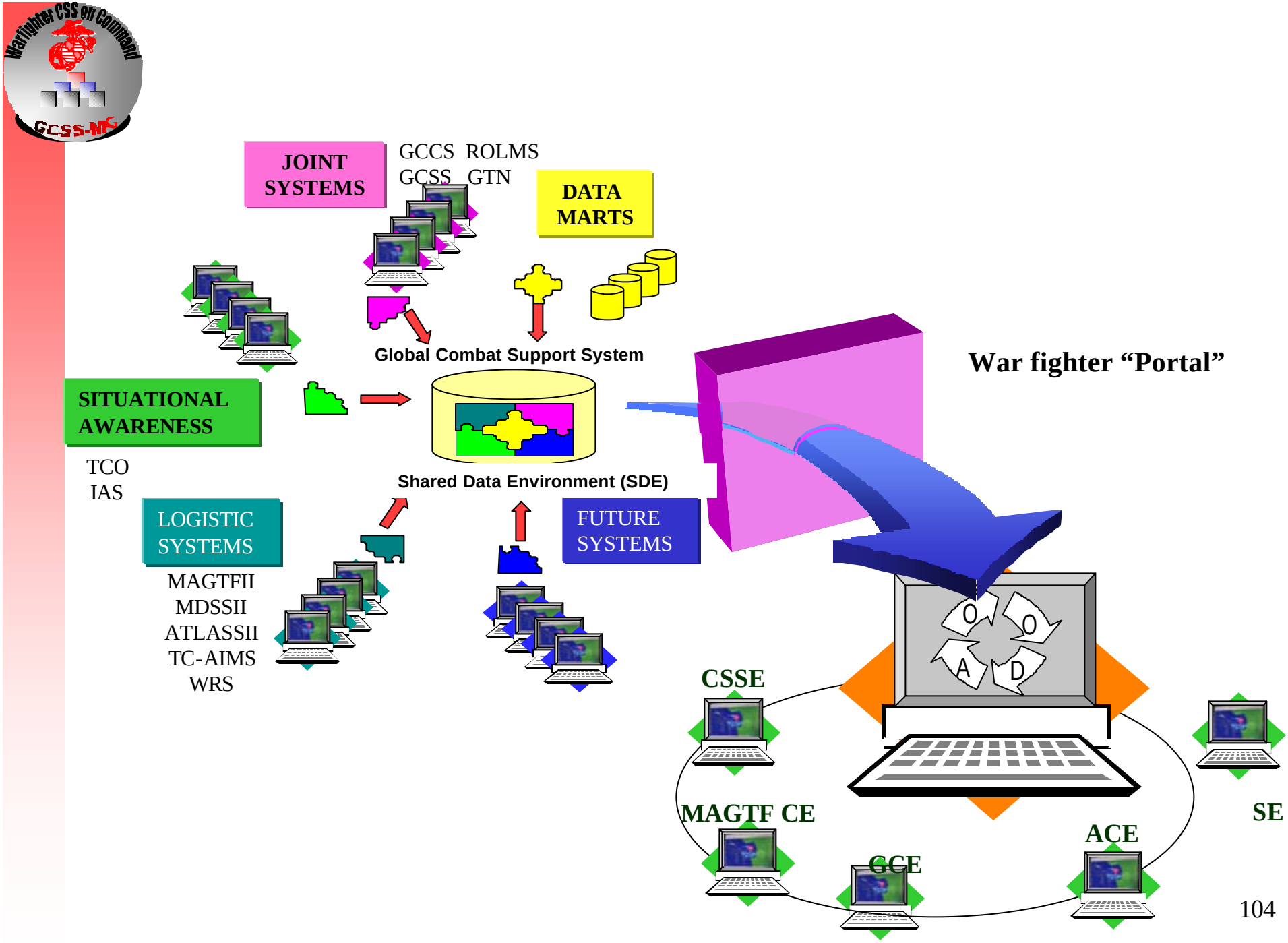
Proven methodology that is *evolutionary*, not *revolutionary*

POC INTEGRATION

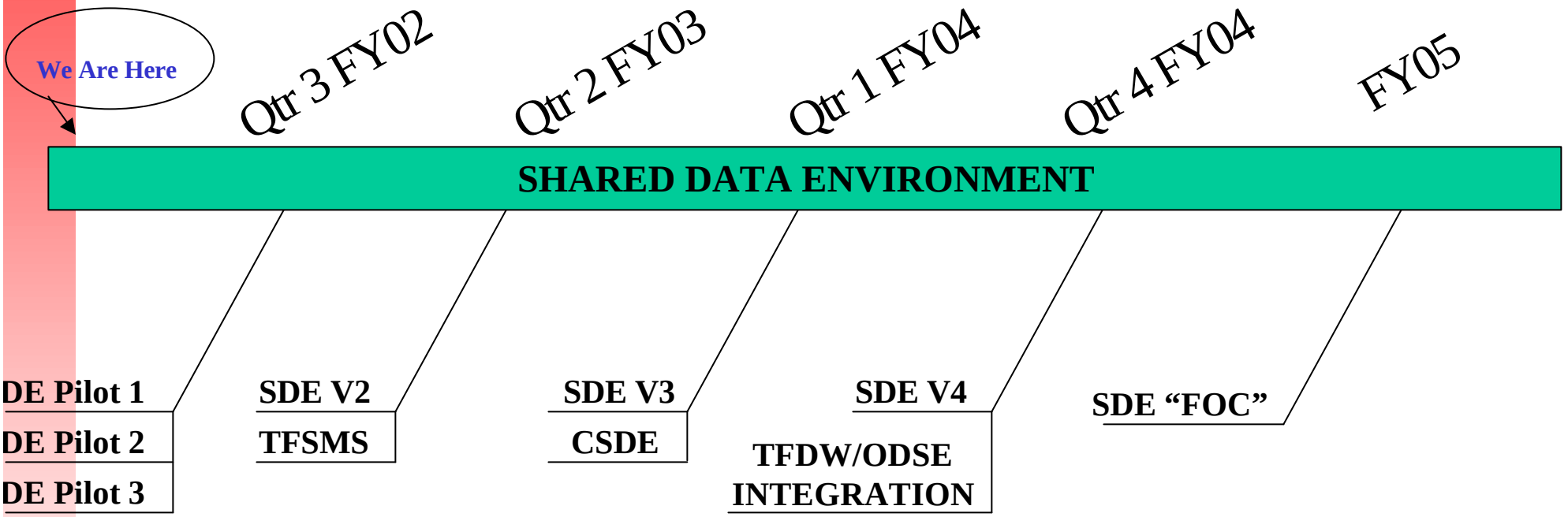


SDE to GCSS-MC




JOINT SYSTEMS
GCCS ROLMS
GCSS GTN
DATA MARTS
Global Combat Support System
SITUATIONAL AWARENESS
TCO
IAS
Shared Data Environment (SDE)
LOGISTIC SYSTEMS
MAGTFII
MDSSII
ATLASSII
TC-AIMS
WRS
FUTURE SYSTEMS
War fighter "Portal"
O
O
A
D
CSSE
MAGTF CE
GCE
ACE
SE

SHARED DATA MIGRATION



SDE Versions indicate added data and functionality

TFSMS – Total Force Structure Management System
TFDW – Total Force Data Warehouse
ODSE – Operational Data Store Enterprise
CSDE – Combat Support Data Environment (SIPRNET Link)

EMPLOYMENT CONCEPT

- Simplified access to automated information supporting Warfighters and support personnel employing CSS automated information applications.
- To have access to data of any system through one point of entry, into a distributed network of computing devices.
- Data that is independent of the applications and stored in a shared environment.
- Interoperability defined by a single point of entry and subsequent exchange of information.

AUTONOMIC LOGISTICS

Autonomic Logistics will use a system of sensors and communication networks in order to allow the gathering and transmitting of diagnostic and prognostic data as well as logistical mission critical data, to a centralized location so data can be processed and delivered in real to near real-time, to support the war-fighter. The Marine Corps has a need to process logistic information from major systems in a real or near real-time manner from austere environments under various climatic conditions. Autonomic Logistics provides a superior capability for reporting mission critical data (Equipment Health, Identification, Location, Fuel and Ammunition Levels) in legacy and emerging systems in which diagnostic and prognostic systems will be available. The current method of tracking logistical is manpower intensive and subject to inaccuracies. Conducting operations with today's methods requires an inordinate amount of time for communicating logistical and situational information. Autonomic Logistics addresses all of the deficiencies inherent in the current reporting systems, and can be utilized throughout the spectrum of Marine Air Ground Task Force operations. The objective system must interface with existing/planned Combat Service Support (CSS) & Command and Control (C2) automated information management systems through current and future communication systems. This initiative is designed to provide the computing system necessary as part of GCSS-MC that manages, collects, and disseminates the information collected from the vehicles. To some extent this initiative will address communications requirements. The sensors and equipment that is installed on vehicles will be the the responsibility of the vehicle PM. DC I&L will promulgate policy regarding which vehicles will get Autonomic Logistics Capability. Based on that policy, vehicle PM's will plan to add the autonomic logistics equipment to their vehicles.

Clinger-Cohen Checklist

- ☑ System(s) description(s)
- ☑ Portfolio Manager
- ☑ Functional Advocate
- ☑ Operational Budget/Cost Estimate
- ☑ Individual Project Budget/Cost Estimate
- ☑ Performance Measures
- ☒ Information Assurance Architecture
- ☑ Business Process Reengineering
- ☑ Analysis of Alternatives
- ☒ Risk Assessment/Mitigation
- ☒ System Interfaces
- ☑ Integrated Schedule
- ☑ Related Portfolios
- ☑ References to Operational/System Architecture and Requirement Documents
- ☒ Economic Analysis/Trade Studies
- ☒ Test Plan

Acronyms

TCO	Tactical Combat Operations
IAS	Intelligence Analysis System
SDE	Shared Data Environment
GCCS	Global Command and Control System
ROLMS	Retail Ordnance Logistics Management System
GCSS	Global Combat Support System
GTN	Global Tracking Network
MAGTF II	Marine Air Ground Task Force System II
MDSS II	MAGTF Deployment Support System II
ATLASS II	Asset Tracking Logistics and Analysis Support System
WRS	War Reserve System
ACE	Aviation Combat Element
DSS	Distributed Standard System
FDP&E	Force Deployment Planning and Execution
OA	Operational Architecture
DMIR	Data Management and Interoperability Repository
TRANS	Transactional
TC-AIMS	Transportation Coordinators Automated Information Management System
FSSG	Force Service Support Group
CSSD	Combat Service Support Detachment
UOC	Unit Operations Center
EAI	Enterprise Application Interface
ETL	Extraction/Transformation/Loading
ICODES	Integrated Computerized Deployment System
AALPS	Automated Air Load Planning System
U/U	Using Unit
POC	Proof of Concept
SRAC	Systems Realignment and Categorization
SE	Supporting Establishment
MAGTF CE	MAGTF command Element
GCE	Ground Combat Element
CSSE	Combat Service Support Element
TMO	Traffic Management Office
MDL	MAGTF Data Library
ILC	Integrated Logistics Capability
DMI	Data Management and Interoperability
REF	Reference
OODA	Observe, Orient, Decide, Act